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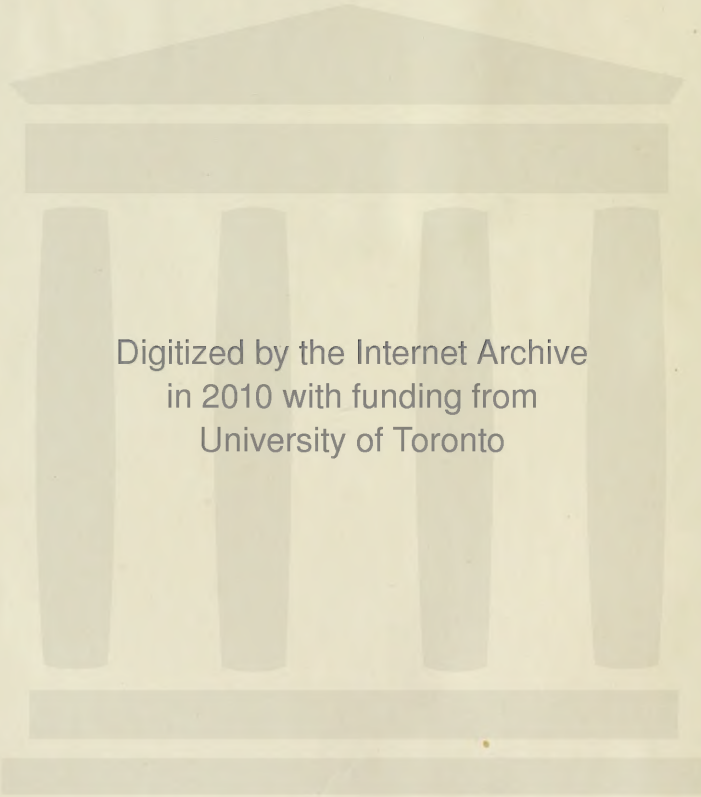




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THE

GLASGOW MEDICAL JOURNAL





THE  
GLASGOW MEDICAL JOURNAL

EDITED BY

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Glasgow and West of Scotland Medical Association

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JANUARY TO JUNE, 1920

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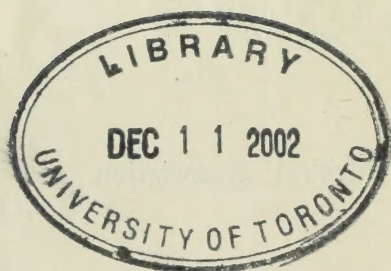
VOL. XCIII

GLASGOW:

ALEX. MACDOUGALL, 70 MITCHELL STREET

LONDON: H. K. LEWIS & CO. LTD., 136 GOWER STREET

1920





THE  
GLASGOW MEDICAL JOURNAL.

No. 1. JANUARY, 1920.

ORIGINAL ARTICLES.

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PRENATAL TUBERCULOSIS.\*

By JAMES W. ALLAN, M.B., C.M., F.R.F.P.S. GLASG.,  
Physician-Superintendent, Bellefield Sanatorium, Lanark.

THE question of prenatal tuberculosis is one of great importance. Formerly, this hereditary transmission of the disease was the commonly accepted view. The evidence seemed glaring. When consumptive persons married and had offspring, it was a matter of common observation that the offspring frequently suffered in childhood from "water on the head" (*tubercular meningitis*), "consumption of the bowels" (*tubercular peritonitis*), or tubercular disease of glands, bones, or joints, including caries of the vertebræ. If spared to puberty or adolescence they frequently fell victims to pulmonary tuberculosis. There did not seem to be any mystery about the matter. The sufferings of the children were considered to be due to the disease directly inherited from the parent—or parents. But of late years

\* Read before the Glasgow Northern Medical Society, 14th October, 1919.

a great change has taken place in medical opinion on the subject, and this change of medical opinion has come to be reflected in public opinion.

The presently prevailing doctrine is that the child of tuberculous parents is not born tuberculous—nor with the seeds of the disease in his system—but that the specific germ, the tubercle bacillus, finds its entry into the child's body after birth. It is admitted that the child of consumptive parents may inherit a predisposition to tubercular disease, and that it is born with an enfeebled body which will afford a good soil for the implantation and growth of the bacillus.

If, however, such a child is kept in a healthy environment, and carefully nourished, and especially kept clear of all risk of infection from its tubercular parent, it is claimed that it may grow up a healthy individual free from consumptive taint. It is asserted that in the bulk of cases—or, at anyrate, a large number of cases—the child is infected by the diseased parent *after birth*. And it is at once evident that this danger is a very real one when we reflect on the close personal contact of mother and child—the kissing, the inhalation of the mother's breath, the atmosphere of contaminated air caused by the coughing of the mother, the danger of "droplet" infection. Of course the suckling of a child by a consumptive mother stands condemned, both on behalf of the mother's health as well as that of the infant. And even if removed from the mother's influence entirely the child still runs great risk of infection from the milk of tubercular cows, from the dust of infected rooms, from flies which have perchance been feeding on the expectoration of a consumptive. So there is a very strong case for the doctrine that tubercular disease in children is due to infection *after birth*. No reasonable person would attempt to deny that. This post-natal infection doubtless accounts for a multitude of cases. But does it account for all?

Is then not something to be said for the old view, namely, that the child may be born tuberculous—showing evidence of tuberculous lesions or concealing in its tissues the seeds of disease which will manifest itself later in life? This is a matter for careful consideration. Is congenital tuberculosis to be dismissed as a popular delusion, as a theory which has no foundation on fact? By no means.



Cases of unmistakable congenital tuberculosis do occur. That is admitted by all parties. But it is contended that such cases are rare—or, at anyrate, few in number. I think that is an open question.

The cases in which children are born with evident tubercular lesions may be relatively few, but is it not possible—nay, probable—that many more are born with the seeds of the disease lying latent in their systems—seeds which at a later period in life will give rise to manifest tubercular lesions? I strongly suspect that such is the case. It being admitted that cases of congenital tuberculosis do occur, it is a matter for consideration how the tubercle bacillus is conveyed from the diseased parent to the offspring: and in this connection we readily think of the sperm of the male parent, and the ovum and placental circulation in the female parent. The general opinion seems to be that the placenta offers the most likely portal of entry for the tubercle bacillus.

Let us now consider more in detail the subject of congenital or ante-natal tuberculosis.

Dr. Bonney, of Denver, in his *Pulmonary Tuberculosis and its Complications*, goes pretty fully into the question, and I shall here insert some extracts from his book:—

“Although,” says Bonney, “the pendulum of medical opinion has swung violently toward the doctrine of contagion, Baumgarten and his followers remain ardent advocates of the theory relating to direct transmission of the bacilli *in utero*. In support of their position may be stated:—(1) The clinical and pathologic evidence pertaining to isolated cases of congenital tuberculosis: (2) the results of experimentation in animals: (3) the known latency of tubercle bacilli in the tissues of the body: (4) the development of the disease at a very early age: (5) the origin of the tuberculous process in portions of the body not readily accessible to infection from without: (6) the frequency of tuberculosis among the children of consumptive parents.

“Before proceeding to a consideration of the several arguments bearing upon hereditary transmission, it is well to review the manner in which congenital tuberculosis is possible of development. The primary source of the infection must be traced to the spermatic fluid, the ovum, or the placental circulation. Transmission through the medium of the spermatic

fluid, though not susceptible of complete negative demonstration, is, however, clearly improbable. To permit this occurrence it must be assumed that tubercle bacilli are not only present in the semen, but also in the nuclear material of the spermatozoön, and in that particular portion with which the ovum is fecundated. Thus the element of probability is strongly opposed to a chance infection, even if bacilli exist in the seminal fluid. It is known, however, that this does not occur save in exceptional instances of tuberculosis of the seminal vesicles, testicles, and epididymis. As these conditions are often associated with sterility from mechanical causes, it is all the more difficult to conceive of bacillary transmission to the ovum through the semen. In advanced congenital tuberculosis the occasional presence of bacilli in the spermatric secretion is not denied, yet no proof has been presented to substantiate the claim that they are present in the semen of pulmonary invalids devoid of such local infection."

Bonney goes on in this strain, his references and comments leaving no doubt on the mind that he does not regard the seminal theory of transmission as worthy of much consideration.

As regards the question of conveyance by the ovum he says:—

"But little evidence has been advanced concerning the possible transmission of the infection by the ovum. Baumgarten, after an artificial fecundation of the ovum of a rabbit with infected seminal fluid, was successful in finding bacilli in the ovum. Up to the time of his observation no bacilli had been found in the ovary. Various experiments have been conducted by him and Maffucci in the inoculation of hen's eggs with avian bacilli. These do not appear at all relevant, however, to a consideration of the congenital transmission of tuberculosis in man."

And so it is evident that the ovum theory does not receive much favour at his hands.

Turning to the third possible channel of conveyance, Bonney goes on to say:—

"By far the most frequent method of intra-uterine infection is through the placental circulation. Even this is exceedingly rare, either in man or animals, and but few well-authenticated cases have been reported. Considerable confusion has arisen from the fact that infants born of mothers in advanced phthisis are subjected to exceptional opportunities for infection shortly

after birth. A special predisposition to infection exists in such cases, and tuberculosis may develop with wonderful rapidity. It is important, therefore, to remove all doubt as to the possible extra-uterine origin of the disease before assuming its inclusion in the category of congenital tuberculosis. Obviously, in the great majority of cases this is attended with much difficulty. No uncertainty, however, is involved in observations relating to foetal and placental examinations, instances of unquestionable tuberculosis of these tissues being recorded. Well-defined tuberculous changes have been reported in the lungs, liver, spleen, pleura, and peritoneum of infants dying a few days after birth, and in the placentas of mothers who were in the last stages of consumption. . . . (*Referring to Warthin's views*), he [Warthin] states that the existence of placental lesions favours greatly the entrance of bacilli into the foetal circulation, but that the absence of well-defined structural change in the placenta does not preclude the possibility of foetal infection. Warthin emphasises the fact that numerous bacilli may be present in the foetal blood-stream without exciting local lesions."

Turning to Cobbett's *Causes of Tuberculosis* (p. 133), we find that author also quoting Warthin. He says:—

"Warthin and Cowie, 1904, submitted the collected evidence of the existence of congenital tuberculosis to a searching investigation, and contributed several cases which they had themselves observed. They assumed a cautious attitude towards this question, but concluded that the dictum accepted by most writers at the time, that intra-uterine transmission is possible, but extremely rare, needs to be supported by further research before it can be taken as final."

And again, at p. 134:—

"In 1907 Warthin returned to the subject. He had in the meantime been able to collect another twelve cases of tuberculosis of the placenta from the literature. The rapidity with which the recorded cases had increased, together with the small number of observers who had recorded them, Warthin held to be in favour of the view that congenital tuberculosis is commoner than it is usually believed to be. Two observers, namely, Schmorl and Geipel, had actually found nine placentas tuberculous out of sixteen taken from tuberculous mothers."

Well, we thus find that evidence of ante-natal tuberculosis is



not wanting—although the evidence is usually qualified by the assertion that it is rare—or, at anyrate, not common. This paucity of cases may be true as regards cases presenting clear evidence of tubercular mischief. But may there not be many other cases in which the mischief lies *perdu*? I strongly suspect that such may be the case.

Reverting to Bonney, I take the following statement from his book (p. 67):—

“It has been reported that despite the normal appearances of foetal organs, and of the placenta, positive results have followed the inoculation of animals with portions of these tissues. The same is true of injections of blood from the placental circulation. In contradistinction to these observations a large number of similar experiments have been performed without the production of tuberculous infection in lower animals.”

Now, to my mind, it clearly follows that, if we accept the first part of that question as a statement of fact, these portions of foetal and placental tissue which were apparently healthy must have contained some seed—some spore—or some “inverted” form of tubercle bacillus to account for the subsequent development of tubercular mischief in the animals inoculated with them. I do not see how you can get away from that. And if you accept that, it surely follows that the absence of evidence of tubercular mischief in the foetus—or the newly-born child—is no guarantee that it is free from tubercular taint.

There may be T.B. in some shape or form lying *perdu* in its tissues.

The following quotation from Bonney (p. 68), points to glandular structures as affording a nidus for latent T.B.:—

“The prolonged latency of bacillary infection, particularly in the glandular tissues, without producing active symptoms until a remote period of diminished resistance, is often regarded as indication of a congenital invasion. The basis for belief in latent glandular infection is the recognition of tubercle bacilli in bronchial mesenteric lymph-nodes which are macroscopically intact.”

This statement is one well worth bearing in mind.

As regards the question of *spores*, you will find in Flüggé's *Micro-organisms* (new Sydenham Society, translation by W. Watson Cheyne, M.B.), at p. 262, this statement made regarding

the tubercle bacilli:—"They are often spore-bearing, the number of the spores being usually 2-4 or even 6."

But I am informed by a friend of mine, Dr. R. M. Buchanan, Bacteriologist to the Corporation of Glasgow, that tubercle bacilli do not produce spores. So it is evident that the statement made by Flügge has been discredited.

But, putting aside the question of "spores," it is evident to me that when apparently healthy tissues are employed to inoculate animals—and the result is the development of tuberculosis in the animals so inoculated—then these apparently healthy tissues must have contained some germ—seed or "inverted" form of tubercle bacillus capable of giving rise to that tuberculosis. And therefore it follows, as I have already said, that although a fœtus or newly-born child shows no sign of tuberculosis, it may contain the germ of that disease, and may later in life develop tubercular meningitis, tubercular peritonitis, tubercular joints or bones, or phthisis pulmonalis.

And I cannot help believing that, to use a sort of stock phrase, ante-natal tuberculosis "is more common than is generally supposed."

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## IS FAT STARVATION A CAUSAL FACTOR IN THE PRODUCTION OF RICKETS?

By H. S. HUTCHISON, B.Sc., M.B., CH.B.,  
Major, Indian Medical Service.

(*Medical Department, Royal Hospital for Sick Children, Glasgow, and  
Department of Physiology, Glasgow University.*)

At the present time in this country there are two main lines of thought regarding the primary etiological factor in the production of rickets. The supporters of one view believe that rickets is a disease akin to beri-beri and scurvy, and that it is due to a deficiency in the diet of the fat soluble growth producing factor. The other point of view is that rickets is not a deficiency disease, but that it is caused by lack of exercise and want of fresh air during the period of development. It is not my intention, in the present paper, to discuss these. In their study into the etiology of rickets, Noël Paton and Findlay conclude, from the investigations of Miss Ferguson, that "while the amount of fat in the diets of non-rachitic families is on an average 10·7 per cent higher than that of the rachitic, the overlap is so great that a defective supply of fat cannot be considered as playing an essential part in the causation of rickets." There is, however, the possibility that though the supply of fat is adequate, the rachitic may not be able to absorb what is ingested, and that a fat starvation is really present. To determine this a series of balance experiments were carried out, and the following tests were applied in the same way as for infantile marasmus in a previous paper.

1. Is there an excessive loss of fat through pancreatic insufficiency?
2. Is there an excessive loss of fat through the passage of unduly large motions?
3. Is there a true defective absorption of fat?

1. *Digestion of fat in rickets.*—As in infantile marasmus, the



degree of splitting of the faeces fat was taken as an indication of the activity of the pancreatic lipase. From Table I it will be seen that in rickets there is no evidence of defective digestion of fat, and that therefore there is no defective absorption of fat from this cause.

TABLE I.—SHOWING THE EXTENT OF FAT SPLITTING IN RICKETS AND TETANY.

	PERCENTAGE OF FAT SPLIT.		
	Maximum.	Minimum.	Average.
Healthy, . . . .	100·0	87·9	95·2
Rickets, . . . .	100·0	81·6	96·3

2. *Fat output and faeces weight.*—In 18 examinations of the faeces in rickets, the weight of the dry faeces was on an average 11·5 grams and the average output of fat was 3·91 grams, as compared with 9·9 grams and 3·3 grams respectively in health.

TABLE II. SHOWING THE OBSERVED AND CALCULATED PERCENTAGE ABSORPTIONS OF FAT IN RICKETS.

Percentage Absorption Observed.	Percentage Absorption Calculated.
82·6	83·8
84·7	93·5
83·3	82·9
94·1	93·0
85·4	84·4
82·6	84·7
83·4	82·7
84·2	82·6
90·0	87·9
90·9	94·9
37·6	34·9
78·7	69·1
97·0	96·9
56·1	64·5
85·2	87·2
81·1	88·0
94·5	90·2
89·0	88·7
Av. 82·2	82·7

The excessive loss of fat in rickets over healthy subjects was only 0·61 grams per day, and the difference in the average fæces weight only 1·6 grams, so that the loss of fat through more bulky motions may, for all practical purposes, be neglected, since an excessive loss of 0·61 grams of fat per day will in no way affect the nutrition of the child.

When the percentage absorption of fat is considered with reference to the fæces weight, one finds that the observed results agree closely with the calculated ones. A reference to Table II (p. 9) will show this.

In three of these the absorption is apparently slightly defective, but, in the large majority of cases, the observed results are sufficiently close to the theoretical to warrant the assumption that there is no defective absorption of fat in rickets.

3. *Is there a true defective absorption in rickets?*—In my previous paper I have endeavoured to show that a true defective absorption of fat reveals itself in an increase of the percentage of fat in the dry fæces. The average percentage of fat in the

TABLE III.

Fat Intake. Grams.	Fat Retained. Grams.	Fæces Weight. Grams.	Fat Output. Grams.
7·26	2·73	14·2	4·53
14·62	11·51	13·5	3·11
16·47	15·99	1·5	0·48
17·55	9·80	18·7	7·70
20·19	17·26	9·4	2·93
22·26	18·84	7·3	3·42
24·93	20·60	11·5	4·33
25·56	21·79	9·75	3·77
25·95	21·43	12·55	4·52
27·27	22·12	9·7	5·15
28·95	24·77	9·7	4·18
29·81	26·85	11·0	2·96
30·71	25·63	16·0	5·08
31·49	28·64	8·0	2·85
31·74	26·75	16·5	4·99
33·21	31·40	9·7	1·81
37·41	35·21	7·9	2·20
38·92	32·42	20·0	6·50

dry faeces was 31·6 in a series of healthy children. In rickets the average percentage was 34·8, a figure which is very close to that in health, so that one cannot say that the percentage of fat in the faeces is any greater in rickets than in health. There is therefore in this disease no true defective absorption of fat.

There is another fact to show that in rickets there is no defective absorption of fat. In the following table, the fat intake and fat retained are shown, and it will be seen that an increase in intake is associated with an increase in the amount of fat retained (Table III, p. 10).

The increase in the retention of fat does not run *pari passu* with the increase in intake, because of the variations in the faeces weight which influence the fat output, and therefore the fat retained. This variable factor can, to a certain extent, be removed by taking average intakes. These are shown in the following table, from which it will be seen that an increase in intake is accompanied by a corresponding increase in fat retention:—

TABLE IV.

INTAKE.		RETENTION.	
Average Fat Intake.	Increase in Average Intake.	Average Fat Retained.	Increase in Average Retention.
7·26	...	2·73	...
16·21	8·95	12·43	9·70
25·61	9·40	21·70	9·27
33·91	8·30	30·00	8·30

This shows that the more fat that is given the more will the rachitic child absorb, and that therefore there cannot be any defective absorption of fat in rickets.

One can conclude, therefore, that in rickets there is no fat starvation, and that the excessive loss of calcium in this condition is not brought about through the agency of fat. This conclusion is supported by the fact that the average daily excretion of soaps in rickets was 2·2 grams, as compared with 2·5 grams in health. Fat could only remove calcium as an insoluble soap, and as there is no increase in soaps in rickets, there is evidently no connection between the calcium loss in rickets and the fat excretion.

*Method of analysis.*—The 24-hour faeces were collected on



a metabolism bed, the urine being collected separately. They were dried over a steam bath and weighed. In each case about 2 grams of the dried fæces were taken for analysis. The sample was placed in a silica basin and about 15 to 20 c.c. of ether added. The fæces were ground up in the ether with a pestle, and then filtered through a fat-free filter paper into a fat extraction flask of known weight. This process was repeated with successive small quantities of ether till about 100 c.c. of filtrate were obtained. The flask was then placed on a water bath, and the ether distilled off. The residue, which consists of the neutral fat and free fatty acids, was weighed.

The residue was again dissolved in neutral alcohol and titrated with N/10 caustic soda, and in this way the amount of free fatty acid in terms of stearic acid was determined.

The original residue of dried fæces, after the first ether extraction, was then treated with a small quantity of 50 per cent HCl, and digested over the steam bath almost to dryness. By this means the soaps are split up, free fatty acids being liberated. These are extracted as before and weighed.

In a certain number of cases the soluble soaps were estimated, but as they were present in very small quantity they were determined along with the insoluble soaps.

The estimation of the milk fat was made in a similar way. 25 c.c. of milk were dried, and the dry residue was extracted with successive small quantities of ether.

Both in this paper and in the previous one I am indebted to Professor Noël Paton and Dr. Leonard Findlay for many valuable suggestions and kindly criticism, and for this I would like to express my deepest thanks.

A grant towards the expenses of this research was made by the Medical Research Committee.

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SORES, ANALOGOUS TO VELD SORES AND BARCOO  
ROT, APPEARING AMONG SOLDIERS WORKING  
IN BLUE CLAY AND IN CHALK.

By D. DALE LOGAN, D.S.O., M.D., D.P.H.,  
late Lieut.-Colonel, R.A.M.C. (Temp.).

(Concluded from p. 261, vol. xcii.)

*Exciting causes.*—Regarding the prevalence of sores among men working in blue clay, apparently two substances in the clay are at work irritating the skin, one having a dehydrating action, the other an absorbent one. I am indebted to Lieut.-Col. T. W. E. David, C.M.G., F.R.S. (Professor of Geology, University of Sydney), on the staff of the Inspector of Mines, G.H.Q., France, and to Professor Strahan, F.R.S., Director, Geological Survey and Museum, for the following information regarding the composition of clays:—

In Ypresian clay the following minerals are present, those most abundant being mentioned first:—(1) Hydrated alumina (Gibbsite): (2) hydrous silicate of alumina (Kaolin): (3) free silica: (4) mica (mostly potash mica): (5) iron pyrites and marcasite ( $\text{FeS}_2$ ) with probably some ferrous sulphide ( $\text{Fe}_2\text{S}$ ): (6) carbon in varying amount.

The composition of blue clay samples taken from the same district may vary; generally they will be found to be comparatively rich in pyrites, amounting to several per cent. The brownish colour through the blue is due to a mixture of glauconite and dust-fine pyrites (marcasite). The latter is a very unstable form of  $\text{FeS}_2$ , which readily decomposes and gives rise to ferrous sulphate.  $\text{H}_2\text{SO}_4$  is also formed from the decomposition of iron pyrites. As much as 1.5 per cent of sulphuric anhydride may be found in water from springs in certain blue clay areas. The presence of  $\text{SO}_2$  or  $\text{H}_2\text{S}$  gave the objectionable smell to many of the dug-outs in clay, which

raised the suspicion among the occupants that there were dead bodies in the vicinity.

It is questionable if  $\text{H}_2\text{SO}_4$ , iron sulphides or sulphates are present in sufficient quantity to start the mischief, although cracks of the skin once formed might be aggravated by their presence. The skin is better protected against the action of acids than against alkalies, and the lesions produced by blue clay bear no resemblance to those found among workers in vitriol and other works.

All fine grained clays act as a Fuller's earth. Indeed, some of the blue clays, *e.g.*, Ypresian and London, are closely akin to Fuller's earth, and have the power of absorbing moisture and grease. If the clay when handled is dry to the touch, it will readily take up the oily matter from the skin. It was well known among the tunnellers that when clothes impregnated with grease, oil, &c., were worn when working in blue clay they became quite clean and free of oil after a few days. Blue clay has a similar action on the skin, carrying away the natural oil, so that the skin becomes very dry and very liable to crack. It was quite common to see the skin round the nails hard and fissured, while the nails became very brittle. Through the cracks micro-organisms gained an entrance. Gibbsite (an alumina), which is present in considerable amount in Ypresian clay, is an excellent absorbent.

The Fuller's Earth Union has had no experience of septic sores occurring among their workmen: and from enquiries made I have failed to discover the existence of any such sores among men who have been working on the tubes driven through London clay, which is of similar composition to Ypresian clay.

It is questionable whether  $\text{H}_2\text{SO}_4$  is ever present in sufficient quantity to have a dehydrating effect on the skin; if this action is present it must be slight. The disappearance of the oil from the skin is more probably due to the Fuller's earth action of the clay: the Gibbsite, as we have noted, forming an ideal absorbent. The first action is a physical one, the resistant powers of the skin being weakened by the withdrawal and absorption of the oil, and the skin becoming dry and cracking readily, besides being easily damaged by slight knocks. The vitality of the

cells in the true skin under the keratinised layer would be lowered by the withdrawal of the oil, and this would predispose to infection.

*Septic sores in men working in chalk.*—It is well known that when the hands are washed after prolonged contact with chalk they become dry and harsh, and remain so for some time. The washing apparently carries away the oil from the superficial parts of the skin, the oil being previously split up with the formation of calcium soap.

Continuous maceration of the tissues will also lead to invasion by pyogenic organisms, which explains the appearance of sores on the hands of men who were constantly handling wet sandbags containing chalk or clay.

*The bacteriology of septic sores.*—Major Adrian Stokes, who examined a number of swabs from typical cases of sores in miners who had been working among Ypresian clay, found staphylococcus aureus in every one, and in a few streptococcus as well; but the latter were never predominant. Where the lesion had penetrated more deeply it was usual to get streptococci, but in the superficial lesions almost pure growths of staphylococci were obtained.

Colonel Martin found that the predominant organism in Barcoo Rot, from which the Australians in Egypt suffered, was staphylococcus. Pus taken from unbroken blisters showed growths of staphylococci only, usually albus with a few aureus and citreus. Martin laid great stress on the infection of the hair follicles, which were invariably attacked, and he believed that this was the usual route of invasion and spread.

In Bishop Harman's investigation of Veld sores, only staphylococci were found in the pus from unbroken blisters. These undoubtedly gave the cultural characters of staphylococcus pyogenes aureus. He believed that the sores were produced by infection of the epidermal structures by staphylococci of low virulence, the normal resisting power of the skin having been weakened by changes in nutrition brought about by prolonged subsistence on a restricted diet. Harman was very much struck by certain distinguishing characteristics of the cocci found, but



these are not uncommonly seen among certain strains of staphylococci, and all the evidence goes to show that Barcoo Rot, Veld sores, and the sores met with among those working in the blue clay of Flanders and the chalk of France, are identical. They are all caused by a staphylococcus of peculiarly resisting powers, but of comparatively low virulence.

*Preventive measures adopted among tunnellers.*—Frequent baths and regular changes of underclothing were essential. When this was neglected or impossible owing to exigencies of warfare, a rapid increase of I.C.T. at once resulted. The hair should always be kept closely cropped. Long dirty hair was a frequent cause of boils, ulcers, &c., appearing on the back of the neck. Clothes, especially trousers, should be frequently brushed to remove dirt. Skin parades should be held at regular intervals by the medical officers, in order to detect skin lesions; and there should be active co-operation of combatant officers with medical officers in order to detect slight cases for early treatment. The men should be encouraged to report to the medical officer the appearance of any skin lesion. At bath parade all men should be inspected by the officer in charge of the bathing party, and men found suffering from any skin trouble reported to the medical officer.

Men working in clay or chalk were supplied with oil or vaseline, which was applied before going on shift, and also after the hands had been washed. After baths oil was rubbed into the hands and legs. A N.C.O. was responsible for seeing that these preventive measures were carried out.

*Active Treatment.*—Unbroken blisters were clipped away with scissors, and the sero-purulent contents evacuated. Where the blister had already burst all loosened epidermis was removed. The raw surface thus exposed was swabbed over with spirit or hydrarg. perchlorid. solution (1 in 2,000). Bipp was then applied. Investigation showed that hot boracic fomentations, which were formerly largely used to clean these sores, soddened the skin, decreased its resisting powers, and frequently led to the spread of the infection. It was also found that drying applications like tinct. iodi., although much more successful than

wet dressings, causing rapid crusting and healing, were frequently unsuccessful, fluid again appearing under the scab.

The ideal treatment of any septic lesion is to inhibit the development of micro-organisms with the least possible disturbance of the tissues. Before Bipp was used, a considerable amount of damage was done by too frequent dressing: with Bipp the dressing was left undisturbed for two days.

*Vaccine Treatment.*—The application of Bipp was combined with the administration of vaccine as suggested by Major Adrian Stokes, who kept the medical officers supplied. This was the routine treatment adopted by the medical officers of tunnelling companies, who were all agreed regarding its efficiency.

Experience proved that the following method of dosage was most effective :—

1st day,	.	200 millions	= 0·2 c.c., or 4 minims.
2nd day,	.	300    ,,	= 0·3    ,,   6    ,,
3rd day,	.	500    ,,	= 0·5    ,,   9    ,,
7th day,	.	500    ,,	= 0·5    ,,   9    ,,
12th day,	.	1,000   ,,	= 1·0    ,, 18    ,,

There was very little reaction, so that the men did not object to this line of treatment. It provided an immunity against staphylococcus sufficient to cure the sores and to protect against further infection for a period of four to six months. This period was not definitely established: it appeared to vary, and in some cases was longer than six months. Where there was a return of the sores, an initial dose of 0·5 c.c. was given, followed in five days by 1 c.c. A single dose should never exceed 2 c.c. Some of the medical officers commenced with 0·4 c.c., increasing up to 1·5 c.c.: they contended that they got quicker results in this way.

The administration of vaccine appeared to localise the infection, which ceased to spread. After this treatment was adopted it was found that the nails were rarely involved. Statistics from several tunnelling companies in which sores were very prevalent showed that the time occupied till cure was complete had been much reduced since the use of Bipp and vaccine—seven days instead of fifteen to twenty-one days. The truth of this

was demonstrated by carrying out control tests. Formerly it was found that sores on the legs were very intractable to treatment; these reacted to the combined treatment almost as rapidly as sores on the hands.

Where a mixed vaccine (staphylococcus and streptococcus) was used, the local and general reaction was much greater, and more care was necessary in administering the vaccine.

The periodic skin parades and other preventive measures adopted in tunnelling companies resulted in a very striking decrease in wastage from septic sores.

The experience in connection with septic sores gained in France may prove of value in certain occupations (*e.g.* mining), where such sores may be found, and where they are generally put down to another cause.

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#### REFERENCES.

- <sup>1</sup> Lient.-Colonel Martin, "Observations on the Pathology of Barcoo Rot (Veld Sores)," *British Medical Journal*, 9th June, 1917.
  - <sup>2</sup> Bishop Harman, "The Clinical and Pathological Characters of Veld Sores," *Journal of Pathology*, vol. ix, p. 1.
  - <sup>3</sup> Harland, "Veld Sore," *British Medical Journal*, 1901, vol. i, p. 952.
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## Obituary.

ROBERT WARDROP FORREST, M.D., F.R.F.P.S.G.  
(RETIRED).

BY the death of Dr. R. W. Forrest, which occurred last month, a well-known practitioner of the South Side of Glasgow has passed away.

Deceased may be said to have come of a medical stock. His father—who practised in the earlier decades of last century in the village of Galston, and died there, in 1848, from typhus, at that time epidemic in the district—had in his youth been apprenticed for seven years to an uncle in Edinburgh, who was a “surgeon and druggist.”

R. W. Forrest studied medicine in the Old College in High Street. He entered on his studies in 1862, and graduated M.B., C.M. in 1866, “with honours.” Among his teachers were Allen Thomson, Thomas Anderson, Walker Arnott, Andrew Buchanan, Easton, Lister, Gairdner, and Harry Rainy. Shortly after graduating he commenced practice in the district comprising Hutchesontown, Gorbals, and Tradeston. Govanhill, Crosshill, and Mount Florida were then in an embryonic condition, and Butterbiggins Road was a country lane.

He continued in active practice till about ten years ago, and during this long period he beheld the city transformed not only as regards size and extent, but also by the inception and development of a public health organisation. What a contrast with his early professional experience when typhus, enteric, small-pox, and scarlet fever were all treated in the patients’ homes, and sanitation was unknown!

He took his M.D. in 1869, and in 1906 he became F.R.F.P.S. Glasg. He enjoyed an extensive practice, and was keenly alive to the advances of medicine. He was a man of wide interests, however, and at one time devoted a good deal of attention to metallurgy. The result was that, in association with his



brother, the late Dr. William Forrest, also of this city, and with Mr. Macarthur, he elaborated the well-known "Cyanide Process" for gold extraction, which revolutionised the gold-mining industry throughout the world. A year or two ago his health became impaired, and latterly he was more or less confined to the house.

About the time of his retiral from practice he became honorary president of the Southern Medical Society, and his presidential address, "Then and Now: Some Reminiscences and Professional Recollections," was delivered in 1909. This was partly autobiographical, but it also gave a very interesting account of the medical history of his time by one who was both an eye-witness and a participator.

His wife predeceased him by some years, but he is survived by a family of three daughters and six sons, four of the latter being members of the medical profession. Three of them practise in Glasgow, and a fourth is in the Indian Medical Service.

. . . . .

A professional friend writes thus of him:—

"His loss will be felt by a very wide circle of the profession. Personally he was, in my estimation, one of the finest types of men in our profession—a type, alas! we see too little of nowadays. He loved his profession, and was, in his day, an ornament in it; for not only was his own work good, but he always had a kindly and courteous consideration for the work of others."

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## CURRENT TOPICS.

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**MEDICO-CHIRURGICAL SOCIETY NOW "ROYAL."**—"His Majesty has been graciously pleased to direct that the Society shall be known as the Royal Medico-Chirurgical Society, Glasgow." This announcement was made by the President (Mr. A. E. Maylard) at the Centenary Celebration Dinner of the Society, held in the Grosvenor Restaurant on 17th ult. There was a large turn-out of members and their friends, and there were many representative guests, including ex-Lord Provost Sir Thomas Dunlop, Bart., G.B.E., Principal Sir Donald MacAlister, K.C.B., Sir Kennedy Dalziel, Sir Humphrey Rolleston (President of the Royal Society of Medicine), Emeritus Professor Francis M. Caird (President of the Edinburgh Medico-Chirurgical Society), Professors Sir Harold Stiles and G. Lovell Gulland, Edinburgh; Sheriff A. O. M. Mackenzie, Mr. James Andrew (Dean of the Faculty of Procurators), and others.

A detailed report of the function will appear in our next issue.

**NURSES REGISTRATION BILL.**—An extraordinary meeting of the Royal Faculty of Physicians and Surgeons was convened for Tuesday, 16th December, to consider a remit from the Council of the Faculty in the following terms, viz.:—

"That no Nurses Registration Bill will be satisfactory which does not provide a single nursing authority for the United Kingdom, a single standard of training, a uniform examination qualifying for registration, and a single register."

This remit, which was the recommendation of the Council, arose out of a discussion on the various Nurses Registration Bills at the ordinary meeting of the Royal Faculty on 1st December, when Dr. McGregor Robertson moved that the matter be remitted to the Council with power to act, which was opposed

by Dr. Archibald Young, who moved, as an amendment, that the matter be remitted to the Council for consideration and report. Dr. Young's amendment being carried by a considerable majority, the matter was remitted to the Council for consideration and report. The result of their deliberation took the form of the remit as above, which was put to the meeting on 16th December as a motion from the chair, and, being duly seconded, was supported by Drs. Eben. Duncan, M'Gregor Robertson, and James A. Adams. As no amendment was proposed, the motion became the unanimous finding of the Royal Faculty.

Dr. M'Gregor Robertson, in supporting the motion, pointed out that any resolution passed by the Faculty could then be little else than a pious expression of opinion, and would probably avail but little, as three separate Nurses Registration Bills for England and Wales, Scotland, and Ireland respectively had already passed their second readings in the House of Lords. Dr. M'Gregor-Robertson commented strongly on the unsatisfactory position that he contended would result from having three separate Registration Bills for three countries so closely connected with each other and with so many interests in common. He emphasised the fact that though the English Bill had a clause which provided that the Minister of Health "*may* make rules" which might make for reciprocity and interchange between the nursing interests in England and Scotland, it by no means followed that those rules would necessarily be made, and that thus Scottish nurses might be placed at a disadvantage as compared with their colleagues in England.

Dr. James A. Adams also spoke in support of the motion for a single nursing authority for the whole kingdom, and pointed out that if a separate Bill were passed for each country, with the Ministry of Health in England having the power to make rules for reciprocal working among the countries, there was nothing to hinder those rules including a further examination for Scottish Nurses before they could practise their profession in England, and that possibly a further fee might be exacted also, thus placing the Scottish nurse at a distinct disadvantage. Dr. Adams paid a high tribute to the capabilities of nurses trained in Scotland, stating that he considered the training and

qualifications of nurses trained in Scotland to be distinctly higher than of those trained in England.

Dr. McGregor Robertson, in an analysis of the terms of the three different Bills before the House of Lords, showed that the terms of the three Bills, with the exception of the name of the country to which each Bill applies, are practically identical, and urged the futility of having three separate Bills, with inevitable jealousies or complications between the countries, when one comprehensive Bill on the lines of the motion would amply suffice for all.

Dr. Eben. Duncan having also spoken in support of the motion, it was unanimously carried, and the Secretary was instructed to send copies of it to the medical members of the House of Commons, to the M.P.s for the City of Glasgow, and to others interested in the promotion of a Registration of Nurses Bill, as well as to the public press.

HOURS OF MENTAL NURSES.—We learn from a contemporary that Mr. Herbert Morrison, Secretary of the London Labour Party, last month addressed the following letter to Sir Robert Horne:—

“DEAR SIR,—With regard to the endeavours of the Mental Hospital Association to secure exclusion of mental nurses from the Forty-Eight Hours Bill, I am directed to inform you that my Executive Committee is strongly of opinion that the demands of the Association should be resisted. The work of mental nurses, of both sexes, entails much nervous strain, and we are firmly of the opinion that the case for restriction of hours is particularly strong in respect of these workers.”

CREMATION.—The annual report of the Glasgow Cremation Society, recently submitted to a meeting at which Dr. Eben. Duncan presided, is interesting as showing that cremation as a mode of disposing of the dead is slowly but surely gaining ground in Scotland, a considerable proportion of the total cremations in the United Kingdom having been performed in Glasgow, where the Crematorium with the beautiful chapel attached affords means for the reverent and sanitary disposal of the dead.



It emerged from the report that despite the extraordinary rise in prices all round, the cost of cremation has not been raised, while, to meet the needs of the poorer classes, cremations can be performed at the very modest sum of £2. Dr. Duncan, however, stated that but little advantage had been taken by the working classes of cremation as a mode of disposal of the dead. This may probably be attributed more to the minute conservatism of the less educated classes in anything pertaining to death, and also, to some extent, to uncertainty as to the religious aspect of the question, than to any difficulties of a medico-legal character. The safeguards taken by the Society in the latter respect are ample and are sufficient to satisfy the most critical, while the chapel at the Crematorium, equipped as it is with all the adjuncts for a reverent service of committal, has much to commend it to the æsthetic and religious feelings of the most fastidious and of the most pious.

QUAINT CEREMONY AT KILLIN: MEDICINAL STONES.—On Christmas Eve there was duly performed by Mr. J. G. Wilson, the lessee of the Marquis of Breadalbane's Island Mill of Killin, the centuries old custom of "bedding" the relics of St. Fillan, which repose in a grated niche in the eastern gable of the mill, formerly a meal mill for the district and now a handloom weaving factory. Every Christmas Eve the relics are "bedded" on a fresh spread of straws, reeds, rushes, and other wrack not cut by the hand of man but gathered from the banks of the river Dochart where left by the water of the winter spates. These relics are a collection of stones of various sizes, worn round and smooth by water action. St. Fillan used them to massage human beings and stricken cattle and sheep. Miraculous cures were attributed to this action and the blessing of the saint. Once a year the stones were carried in procession—namely, on the saint's day. The Marquis of Breadalbane has insisted by the terms of the lease of the mill that the relics must be carefully preserved and reasonable facilities afforded to the public to view the relics which are in the same apartment as busily clanking looms.

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### NEW PREPARATIONS, &c.

From Messrs. Genatosan, Limited, 12 Chenies Street, London, W.C.1.

*Genasprin.*—This is a pure preparation of acetylsalicylic acid, uniform in quality, and corresponding to the highest grade of genuine aspirin. It is manufactured by Genatosan, Limited, the British purchasers of the Sanatogen Company, and is put up in five-grain tablets, which can be given with equally good effect wherever aspirin was formerly prescribed.

From Vitamogen, Limited, 24 Holborn, E.C.1.

*Vitamogen.*—This preparation, manufactured by Vitamogen, Limited, is a concentrated food which contains, besides the usual elements of a complete food, a large proportion of phosphorus and of vitamins. It is palatable and easily prepared, being largely soluble in cold water, and should prove useful in deficiency diseases and conditions of nervous exhaustion.

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## REVIEWS.

*Heart: Past and Present.* By EDGAR LEA, M.D.Vict., M.R.C.P.  
Lond. London: Baillière, Tindall & Cox. 1919. (7s. 6d.  
net.)

OF recent years there has been a plentiful output of text-books relating to the heart. This present volume, though dealing with the same subject, has the merit of going upon lines of its own. It consists of two parts—the first, headed “The Past,” summarising the principal advances in the knowledge of heart diseases from the earliest times until the end of the nineteenth century; and the second, entitled “The Present,” giving an account of the methods and scope of the investigations of the present day. In the first part, chapters are devoted, among others, to Corvisart, Laennec and his critics, and Stokes. The teaching of Stokes, who died in 1878, was substantially that which persisted up to the beginning of the present period.

Dr. Lea shows that one of the modern developments in the examination of patients suffering from heart disease is that less attention is paid to objective signs, and much more to the subjective signs or symptoms. This emphasises the fact that one of the most important things to be discovered is the prognosis, in the formulation of which symptoms are of great help. The newer methods of physiologists and cardiologists have done much to elucidate the mechanism of the heart's action and the mechanism of the defects which cause disease; but these methods have been of more assistance to the physician in making a diagnosis than in either estimating prognosis or advising treatment. The author deplors the lack of statistics to show the progress of cases of various forms of heart disease, and mentions that Nauheim, with great opportunities for obtaining information, has failed particularly in this respect. When results can be reduced to figures, a great advance has

been made, and there is no large body of figures available for reference.

As regards treatment, Dr. Lea points out how unsatisfactory it is that patients should be treated for a few weeks in hospital, and then turned out into the world to make the best of it. He favours the formation of heart clinics, and the setting up of institutions for the study and treatment of heart disease. "Cardiovascular disease must be looked upon as a great evil in our midst, a scourge like tuberculosis, and, like it, to be attacked at its sources, or, when this is not possible, to place its victims at their maximal advantage under this handicap. We ought, in fact, to deal with heart disease much as we have dealt with tuberculosis. Clinically, of course, there are important differences which would be reflected in a different manner of approach. . . . Both are essentially chronic complaints. Both affect all classes and all ages. And both represent formidable loss of health and labour to the community."

This book, though containing no new facts about heart disease, is interesting from its historical summary and critical discussion. The author's style, unfortunately, is rather involved, and this tends to obscure the broad outlines of the book. The last chapter but one bears the sentimental title "The Loneliness of the Cardiologist," and opens with the words, "The heart worker is a lonely individual." But cardiologists are nowadays a goodly band, and can bear one another company.

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*The Hearts of Man.* By R. M. WILSON, M.B. London: Henry Frowde and Hodder & Stoughton. 1918. (6s. net.)

MAN has five hearts, not one—the right and left hearts, the pulmonary blood-lake, the mesenteric blood-lake, and the peripheral blood-lake or cutaneous circulation: that is the thesis Mr. Wilson sets out to prove in the present volume of the Oxford Medical Publications. He leads up to his proof by a study of the phenomena of the reaction state—the state of starting or of tension into which every sudden emotion or exertion throws the body—and of the condition of the circulation which it brings about. He shows that in that state the blood is



driven out of the great cavities of the trunk into the cranium and the muscles partly by the contraction of the abdominal muscles and partly by contraction of the arterioles of the blood-lakes, this contraction being stimulated by the effect of adrenalin on their sympathetic innervation, and the adrenalin itself being thrown in larger quantity into the circulation by the squeeze of the abdominal muscles on the suprarenal capsules. He shows that, like the heart itself, the arterioles of the blood-lakes, which contract synchronously with it, are under the control of the adrenalin sympathetic, precisely as are the various sphincters of the bowel described by Keith; and he describes the cardiac musculature and the musculature of these arterioles as so many sphincters of the vascular system, contracting under the influence of adrenalin as do the sphincters of the bowel. To make the analogy complete, there should be between these vascular sphincters or "hearts" peristaltic areas similar to those of the bowel and inhibited, like them, by adrenalin. This leads him to a study of the pulse, in which he seeks to demonstrate that the usual explanations of its anacrotic and dicrotic waves are physically inadequate, and that no other interpretation is open than that these are peristaltic waves in the vessel wall, this peristalsis differing entirely from the systole and the diastole of the "hearts," which are to be conceived as sphincters flung round a continuous vessel, of which the peristaltic movement is inhibited during systole and activated during diastole. Further, the vagus inhibits the action of the sphincters of the bowel and activates intestinal peristalsis; it is also the "nerve of diastole" in connection with the heart, *i.e.*, it inhibits the cardiac sphincter, and through the depressor nerve it inhibits the other vascular sphincters also, causing a general vasodilation; while there is some evidence in the study of the pulse to show that its action favours the occurrence of increased peristalsis in the vessels. The true sympathetic system is activated by adrenalin; is there any evidence that the vagus sympathetic is activated by an analogous internal secretion? Mr. Wilson shows that the effects of pituitrin resemble those of vagus stimulation; that pituitrin does not act upon the adrenalin sympathetic; that its action upon the vascular system, after the rise of pressure following the first dose, is very similar to that of the depressor nerve; that it constricts vessels on which adrenalin has no

effect; and that its effect on the bowels is opposite to that of adrenalin, and similar to that of the vagus. If, then, its effect is analogous to that of the vagus, the systems adrenalin-sympathetic and pituitrin-vagus are true opponents, and we should expect to find pituitrin activating the muscular peristaltic areas, *i.e.*, constricting the vessels to muscles and those connecting the different blood-lakes or "hearts." This, in fact, it does.

A former assistant of Sir James Mackenzie, Mr. Wilson submitted his MS. to him and to Professor Bayliss, and received from both a detailed and in some respects damaging criticism. He very candidly reproduces their remarks in his preface, in which he attempts to answer the objections. In this he is, we think, to a large extent successful, but his answer to Professor Bayliss's observations does not entirely remove their force. He has, however, made out a case which is well worth considering, and in the course of his demonstration he has thrown fresh light on many apparently familiar phenomena, and has produced a fascinating book.

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*Psychoses of the War.* By H. C. MARR, Lieut.-Colonel, R.A.M.C. (Temp.) London: Henry Frowde and Hodder & Stoughton. 1919. (16s. net.)

THIS book of Lieut.-Colonel Marr's, which is published in the "Oxford Medical Series," is founded on the results of observations of 18,000 officers and men, a number equally divided between those suffering from neurasthenia and shell-shock, and those affected by obvious mental disorder. The psychoses of the war, the author says in his preface, have revealed no new mental trait; but the war itself has rendered many who were able to play a useful part in the battle of life less useful, and in many cases unable to play this part. Though no new mental trait may have appeared under the conditions of warfare, there has been a significant change in the comparative numbers of what may broadly be called cases of mental disease. The cases of hysteria and neurasthenia have greatly increased, whereas the numbers of the insane proper have apparently not been affected. The first part of the book is concerned with a description of the

former class, the psychopathies. Dr. Marr believes that neurasthenia arose in only about 2 per cent of previously healthy soldiers. "Careful inquiry has elicited in 80 per cent of the cases a family history of nervous or mental disease, previous nervous or mental breakdown in the history of the individual patients, and where such histories of family or personal neuropathic inheritance are not obtainable, . . . anatomical, physiological, and mental stigmata pointing to nervous instability or inherent mental weakness are revealed." The author regards hysteria as in reality a symptom complex of neurasthenia, one aspect and an important one of this affection, which is a functional affection of the cortical, bulbo-spinal and sympathetic neurones. The word "psychasthenia," first used by Janet in 1903, indicates an affection in which the chief symptoms are obsession and impulse, moral stigmata and deficiency. It is the counterpart of neurasthenia with the mental phenomena rather than the nervous weakness prominent. At the end of this section the general treatment of neurasthenia is considered.

The second part of the book is devoted to a discussion of the diseases to which the name "insanity" can be applied. Here the cases, though occurring in the army, do not differ essentially from those of civil life. Forty-two per cent of the soldiers admitted to mental hospitals were found to have been weak-minded from infancy, while 9 per cent showed signs of adolescent mental enfeeblement. The toxic psychoses, due to some poison, metallic or other, circulating in the blood accounted for 36 per cent, and the several forms of late syphilis for most of the remainder.

An appendix gives the methods of examining the cerebro-spinal fluid, and includes details of the colloidal gold method for the differentiation of general paralysis from other syphilitic affections of the brain. Dr. Marr, like most authors, advises that lumbar puncture be performed a little way from the middle line, and with the patient on his side; but the operation is easier if the patient can sit up, and the advantage of puncture in the middle line of the back is not outweighed by the theoretical objections to it. A second appendix gives an elaborate form for mental case-taking.

The book is illustrated by good photographs, some of these from cinematograph films. Dr. Marr writes in a lucid and

attractive style, and his work has not lost interest with the passing of war conditions. There is a little ambiguity in several places about his use of the term "blood-pressure" in the sense of the difference between the systolic and the diastolic pressure. "Pulse-pressure" is more commonly used in this meaning.

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*Seale-Hayne Neurological Studies.* Vol. I, No. 2; September, 1918. Edited by A. F. HURST, M.D., F.R.C.P. Humphrey Milford: Oxford University Press (3s. 6d.)

THE second issue of these interesting *Studies* contains fourteen articles, of which nine are wholly and one in part from the pen of the editor. All of them deal more or less indirectly with the phenomena of hysteria as observed in soldiers, and are concerned either with the establishment of the new conception of the disease due in the first instance to Babinski and the French school, or with the treatment of its manifestations by psychotherapeutic suggestion. The Seale-Hayne workers define hysterical symptoms, while refraining from a definition of hysteria, as follows:—Hysterical symptoms result from suggestion, can be consciously and voluntarily imitated, and are curable by psychotherapy; "hysteria is the condition in which symptoms are present which have resulted from suggestion and are curable by psychotherapy." The vasomotor, secretory, and trophic changes associated with many cases are not in themselves hysterical, but are the secondary effects of immobilisation due to paralysis or contracture. The doctrine of fixed hysterical stigmata has disappeared; even the idea of hysteria as a substantive disease characterised by undue suggestibility has disappeared, for anyone may develop hysterical symptoms under sufficiently strong suggestion or provocation. It follows from the definition that hysteria is invariably curable, and that failure to cure implies either ignorance of the proper therapeutic methods or a mistaken diagnosis. "There can be no excuse for diagnosing a case as hysteria and then leaving it uncured, as the cure is an obvious corollary of the diagnosis."

Let us take the cases cited as a test of the validity of this conception. They are virtually all records of cures, most of



them completed in a very short time—a few minutes to a few hours. But in an article by Mr. S. H. Wilkinson on “War neuroses seen during a week’s experience at Seale-Hayne”—surely an instance of rushing into print—we find that of nine hysterical cases cured in a few minutes, “cases Nos. 2, 4 6, 7 and 9 were ultimately invalided from the service with a 20 per cent pension, as, although they were able to return to their old civil occupation, their long illness *and nervous instability* made it improbable that they would again stand the strain of active service.” These were cases respectively of aphonia, paraplegia, footdrop, hysterical gesticulation, and stammer. The symptom, that is, was cured, the underlying nervous instability was not. If hysteria is no more than hysterical symptoms, there should be no nervous instability left when the symptom disappears. Dr. Hurst’s case of hysterical hiccough with monoplegia and talipes required for the hiccough blisters and pressure to the epigastrium, inflation of the stomach, respiratory exercises, fixation of the larynx, waking suggestion, anæsthesia, and hypnosis; and the hiccough persisted in spite of all these. Ultimately it yielded when the man had been kept for some days delirious and semi-comatose with bromide and chloral, and when suggestion was repeated in this condition. Such a case speaks rather against than for the curability of all hysterical manifestations by psychotherapy alone. It would appear, too, from a case recorded in the first issue of the *Studies*, that disciplinary measures may be used in aid of suggestion; a man, suspected of exaggerating his symptoms, it is true, being isolated behind screens, not allowed to smoke, read, or write, fed on bread, meat, and water only, and nobody being permitted to talk to him.

Many of the “cures” are undoubtedly very striking, and the Seale-Hayne workers are doing good service in insisting upon a revision of the classical conception of hysteria. But there is such a thing as running an idea to death. Their argument is from the nature and curability of hysterical symptoms in soldiers, in men, that is to say, the vast majority of whom have possessed a sound and strong nervous organisation until it has been affected by a profound shock or strain. Remove the effects by suggestion or otherwise, the symptoms disappear, and the nervous organisation resumes its former health. But even in

military cases, as would appear from their records, the "cure" does not affect an underlying nervous instability. It is absurd to say, because anyone may present hysterical symptoms under military stresses, that there is no underlying nervous instability in hysteria. In civil life those with a healthy nervous organisation do not become hysterical, and arguments upon the nature and curability of hysteria based solely upon military experience are therefore of imperfect applicability. It is of real service to demonstrate that the symptoms of a given case vary with the nature of the creative suggestion, and can be removed by counter-suggestion in the majority of cases, but to regard hysteria as curable in the sense in which pneumonia is curable—that is, that the patient, once free from symptoms, will remain indefinitely free from them, is merely to darken counsel.

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*The Medical and Surgical Aspects of Aviation.* By H. GRÆME ANDERSON, M.B., Ch.B., F.R.C.S. London: Henry Frowde and Hodder & Stoughton. 1919. (12s. 6d. net.)

MR. GRÆME ANDERSON enjoys many of the advantages of the pioneer, as this is the first book which has been published on this subject. By profession a consulting surgeon, he laid down this work for the life of an aerodrome medical officer, and for four years, as he says, he lived and flew with aviators, and studied them in all their ways. In an introduction Lord Weir writes, "The author is himself a pilot, and has had during the war an extensive experience. . . . The present work is the first to deal with this new and important branch of medical study, and will serve to stimulate further research into the many and varied problems which still require elucidation."

One learns from the first chapter on the history of medical interest in aeronautics that an Edinburgh physician named Black in 1767 came within an ace of being the inventor of the first balloon. He suggested that hydrogen gas would be capable of raising a thin bladder in the air. The first Englishman to make a balloon ascent was John Sheldon, a surgeon. The researches on the effects of diminished atmospheric pressure, made in the seventies by Paul Bert the physiologist, have

remained the basis of subsequent work on altitude effects. The author enters fully into the method of selecting candidates for aviation, and into the diagnosis and treatment of the aero-neuroses, as he terms the manifestations of neurasthenia and hysteria in airmen. These chapters are probably the most valuable in the book, as only a man of wide experience can give advice on what candidates are suitable for selection as flying officers, and on whether those who exhibit these aero-neuroses are to be allowed to fly again. Those pupils who show signs of neurasthenia early in training are unlikely ever to become successful fliers. Other chapters are concerned with the nature of aeroplane accidents, the surgery of aviation, and the main facts about aeroplane dope poisoning. The author singles out fracture of the astragalus as peculiarly an aviator's injury. But the surgery of aviation does not differ materially from other forms of war surgery, and has not the special interest of the medical side of the subject.

There are numerous illustrations which include several radiographs of surgical conditions, and many and unusual photographs of aeroplane accidents. Mr. Anderson's book will be welcomed in Glasgow where, if we mistake not, he is still remembered as the artist of a once-famous Final Year Dinner cartoon.

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*Rats and Mice as Enemies of Mankind.* By M. A. C. HINTON.  
British Museum (Natural History), Economic Series No. 8.  
London: Printed by order of the Trustees of the British Museum. 1918. (1s. net.)

THIS valuable pamphlet—dealing with the habits of rats and mice, their importance as distributors of disease, their destructiveness of grain and other foods, and of various forms of property, and the means of destroying them—appears at a very opportune time. It is now more than ever important to cut down avoidable loss of grain, but the absorption of agricultural labour in the war has diminished the usual destruction of rats and mice to such an extent that their numbers have probably been greatly augmented, and their menace is therefore more than usually threatening. It is well known that rats and their

parasites are responsible for the spread of plague, it is not as well known as it should be that plague is endemic among the rats of East Suffolk. As Mr. Hinton points out they play a prominent part in the spread of many other diseases. From the point of view of utility their activity as scavengers is negligible in the present age, and they cannot be said to have any other redeeming virtue. In his discussion of the means of extirpating the pests, Mr. Hinton lays much stress on the preservation of stoats and weasels, their natural enemies, and protests against the prevailing campaign against them by those interested in the breeding of game. He holds that rats cause more destruction of game than weasels do, and that the extermination of weasels has immensely aided the propagation of the rat. The little book is full of interest and information, and should be widely read both by the profession and by agriculturists.

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*Lice and their Menace to Man.* By Lieutenant LL. LLOYD, R.A.M.C.(T.). With a Chapter on Trench Fever, by Major W. BYAM, R.A.M.C. London: Henry Frowde and Hodder & Stoughton. 1919. (7s. 6d. net.)

THIS volume, one of the Oxford Medical Publications, is, as the preface states, intended for the general reader rather than the specialist.

In a series of interesting chapters, the structure of the body-louse, its life-history and habits, and the mode of its dissemination are described. A chapter is devoted to disinfestation, and reference is made to disinfestation in armies in the field, where the process is more difficult than in a civilian population. The head-louse and the crab-louse are described at length.

A most illuminating chapter, containing an account of numerous original observations, deals with the increased migration of body-lice in fever. The author's observations show that moderate pyrexia is a most potent factor in causing lice to seek another host. Special chapters deal with relapsing fever and typhus fever, and the important part which lice play in the causation and spread of these diseases. Major W. Byam,



R.A.M.C., contributes a chapter on trench fever, and indicates the possibility of getting trench fever in those who have not been in the trenches by means of infected lice.

Though based on war experience, this book is not entirely a war book, for the diseases spread by lice occur apart from war, and only by dealing with the lice problem in an effective manner can they be eradicated.

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*War Neuroses and Shell Shock.* By FREDK. W. MOTT, M.D., LL.D., F.R.S., F.R.C.P. Oxford Medical Publications. London: Henry Frowde and Hodder & Stoughton. 1919. (16s. net.)

THIS is an interesting book. The author has had great opportunities of observing the conditions of which he writes in the Neurological Section of the 4th London General Hospital, and at the Maudsley Neurological Clearing Hospital. Five years ago, this compact volume would have seemed to treat of diseases which to most medical men in Scotland were largely clinical curiosities. At the present day it contains a fund of information, valuable to every physician both for diagnosis and for treatment. The author treats principally of hysteria and neurasthenia. He discusses the question of shell-shock, describes several cases, and records the results of *post-mortem* examinations. While some of the "shell-shock" patients can properly be described as cases of shell-shock in that gross anatomical changes, hæmorrhages for the most part, have occurred in the nervous system (commotional shock), the large majority are true cases of hysteria (emotional shock). There is no simple division between the two, for the latter may be grafted on the former to any extent. To account for these phenomena, Colonel Mott adopts the theory of diaschisis, a term applied by von Monakow to the temporary dissociation by shock of anatomically and functionally correlated systems of neurons. "The researches of Ross Harrison on the living neuron and its growth render it possible to accept as a provisional hypothesis the theory of attraction and retraction of dendrons as an explanation of association and dissociation." The various forms which hysteria may assume in soldiers are described

in detail, and numerous cases are analysed. The question of neurasthenia and its diagnosis is fully treated.

Colonel Mott touches on the different forms of mental disease which are found in the army just as they are in civil life, and agrees with the general view that, contrary to popular opinion, war of itself cannot be considered an important cause of insanity. He is particularly sceptical with regard to epilepsy, as distinct from hystero-epilepsy. “. . . Cases which were said to have developed true epilepsy as a result of shell-shock were either nearly always individuals who had previously suffered from true epilepsy, or an anomalous form of it, or were potential epileptics prior to the shock. This might be assumed from the fact that they had suffered with slight faints or automatisms, or that there was a history of epilepsy or insanity in the family.”

After a section on CO poisoning and its *post-mortem* appearances, the methods employed in the treatment of hysteria and neurasthenia are described at length, and this is one of the most useful parts of the book. An appendix contains a summary of methods for the complete examination of cases of nervous disease.

The book is well illustrated by photographs and diagrams, and there is a good index. It should be in the hands of every medical man who is concerned with the treatment of disabled soldiers or with the assessment of their pensions.

*Anaphylaxis and Anti-Anaphylaxis.* By Dr. A. BESREDKA.  
English Edition by S. ROODHOUSE (GLOYNE, M.D. London:  
William Heinemann, Limited. (6s. net.)

WHEN Richet published his first account of the phenomenon to which he gave the name of anaphylaxis, it was realised that the essential facts about a peculiar biological reaction, hitherto only vaguely known, had been demonstrated in a convincing manner. Richet found that a certain proteid poison (congestin) could be injected in the dog in a small dose without causing any symptoms, but that if this injection had been preceded a few days earlier by a similar small injection, the animal might die within a few minutes. This was in 1902. It was soon found

that a similar result could be brought about with other proteid substances, and in other animals, if two injections were given with an appropriate intervening interval. The question in all its aspects has been the subject of much study in the past seventeen years, and its applications are far more widespread than at first was apparent.

This book of Dr. Besredka's, with an additional chapter by the translator, gives an admirable summary of the investigations carried out by the various workers on anaphylaxis. The author shows that the state of anaphylaxis can be brought about with any proteid, if suitable methods are used, and he is inclined to think that the sensitiveness of some individuals towards certain drugs, such as iodoform and quinine, may be examples of a reaction of a similar nature. There is a full description of the different ways in which the two injections may be given—the first, or sensitising, and the second, or exciting. The matter is one of great practical importance in connection with the use of curative sera in man. This importance has been increased of recent years because, during the war, so many men have received, chiefly in the form of anti-tetanus serum, a sensitising injection, and another injection of horse serum at some subsequent date might have the effect of producing anaphylactic shock. It is often pointed out, and rightly, by makers of serum and others, that injection intravenously, or in some cases intrathecally, will give the most rapid and best results, but they omit to state the fact that a large intravenous injection of serum in a sensitised man may produce alarming symptoms, and possibly even death.

Not the least merit of this book is the space devoted to a description of the methods, simple and easily carried out, by which desensitisation can be effected. Briefly, these consist in the injection, at intervals of a few minutes, of a series of small increasing doses of the serum to be given.

The main facts about anaphylaxis are universally accepted, but there has been no general agreement as to the mechanism by which the symptoms of anaphylactic shock are produced. Besredka sums up the main views fairly, and gives his own, which supposes that the essential changes occur in the cells of the nervous system, and not in the blood. The last chapter contains an interesting account by the translator of recent work on anaphylaxis.

The book is valuable, not only as a lucid account of an important and difficult subject, but also as summarising and criticising the numerous contributions to the literature, some of them difficult of access.

The translation is well done, but there is a curious use of "anodyne" in the sense of "innocuous" (p. 3), and on p. 108, "de Witte" has not been translated to "Witte's." On p. 88, 1, 4, "passive bacterial anaphylaxis" is apparently written for "active." We have noticed one or two misprints—"0.05 to 0.6 c.c." for "0.05 to 0.06 c.c." (p. 34), and "140° F." for "104° F." on p. 46.

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*Prothèse Fonctionnelle des Blessés de Guerre : Troubles Physiologiques et Appareillage.* Par le Dr. DUCROQUET, Chirurgien Orthopédiste de l'Hôpital H. de Rothschild. Préface du Pr. AUG. BROCA. Avec 218 Figures. Paris: Masson et Cie. 1919. (5 fr.)

IN this little monograph Dr. Ducroquet offers to his readers a study of functional prosthesis as applied to those who have suffered from disability from war wounds more or less. The work, while directly a result of the war, is really an "after the war" book, and comes at an opportune moment as a useful guide to surgeons. It will be of great service to them in giving advice for a long time to come to those patients whom war wounds have badly lamed.

Professor Broca contributes a truly graceful preface, in which he declares that any knowledge he possesses, regarding apparatus, he owes to the author. At the same time he expresses himself as being happy if, in compensation, the latter has been able, during their long intimacy, to derive from him any practically useful instruction in anatomy and operative surgery. Professor Broca considers that musculo-articular, or mechanical, physiology is no longer in fashion, having been "dethroned" by chemistry. He adds that if medicine has profited, surgery has suffered by this revolution. The great value of this monograph, in his eyes, lies in the recognition, by the author, of the facts of mechanical physiology as a proper base for functional prosthesis.



Coming to the subject-matter of the volume we find that Dr. Dueroquet has arranged his chapters very systematically. He begins with the general principles of prosthetic apparatus. Such apparatus must rest solidly on the limb to which it is applied, and this requires the judicious choice of "points of fixation." These points are considered according as we have to deal with lower or upper limb, and they fall into three groups or classes—of support, of counter-ascension, and of counter-rotation. The application of these principles to the limbs is next detailed. The descriptions in the text are very precisely given, and are well illustrated in the various figures.

As an example of the author's method of dealing with the three groups of "points of fixation," we may quote what he says regarding the lower limb:—

"The points of *support* will be represented generally by a conical surface with its base below, *e.g.*, the dorsum of the foot, the upper part of the femoral condyles and the dome or crest of the haunches. The points of *counter-ascension* are formed by a flat surface, or by a cone with its base above, *e.g.*, the sole of the foot, the tuberosities of the tibia (*plateaux tibiaux*), and the ischium. The points of *counter-rotation* are formed by the outline of the segment to be embraced by the apparatus. The knee, for example, shows on transverse section a triangular outline. An apparatus moulded on these osseous parts will thus be prevented from slipping round the limb." The various articulations of the limb are then passed in review, and the details of suitable apparatus are indicated.

The next chapter is concerned with the subject of articular mechanics. Very full instructions are given as to finding the physiological axes of the joints, and wherein they differ from the axes of apparatus. The discrepancies are fully considered, and indications are given of what is found in practice to be the best working apparatus. The reader will find in the series of knee-joints shown in Fig. 27 (p. 23), and the relative test thereto, a good example of the author's method.

In succeeding chapters will be found descriptions of various apparatus for immobilising, for limiting movement,

for paralyses, and for ambulatory treatment (*appareils de décharge*).

Chapter IV deals with boots, normal and orthopædic. The various forms of orthopædic boot required for talipes, and for shortening of the lower limb are figured and described.

Chapters V and VI present a kinematic study of normal walking and of walking with a shortened limb, and this is followed by a consideration of ankyloses of the joints of the lower limb. Fractures, pseudo-arthroses, paralyses, and contractures are successively taken up in the concluding chapters of the book.

It may seem that we offer a rather lengthy notice of Dr. Ducroquet's little book; but we feel that the volume is one which should be studied by all who practise orthopædies. There is no doubt that a translation would be welcomed by those who have not an opportunity of perusing the original work.

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*Les Lésions du Corps Thyroïde dans la Maladie de Basedow.*

Par G. ROUSSY. Paris: Masson et Cie. 1914. (3 fr.)

ALTHOUGH this work, which was prepared for the fourteenth congress of alienists and neurologists of France to be held in August, 1914, bears on its title page the date 1914, it has been long delayed in publication by the exigencies of the war. Its subject is the pathology and morbid anatomy of exophthalmic goitre, and it opens, after a brief discussion of the nosological position of the disease and its accessory types, with a prolonged and minute investigation of the morbid changes which it produces in thyroid, parathyroids, thymus, lymphatic glands, sympathetic system, and blood. On the basis of these researches M. Roussy concludes in favour of the thyroid origin of the disease, the part played by other glands such as the thymus being merely accessory. He admits the importance of nervous phenomena, particularly those depending on the sympathetic system, in the clinical picture, but he points out that similar phenomena are equally prominent in Addison's disease, of which no one disputes the place among the affections of the endocrine glands. His discussion of the different

pathogenic conceptions leads him to a study of the various therapeutic means employed, and among these he gives the preference, both on theoretical grounds and as a result of experience, to radiotherapy, which he considers to furnish better results than surgical intervention. The volume is illustrated by numerous admirable plates in colour and black and white, and forms an important contribution to a much debated field of pathology.

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*Bipp Treatment of War Wounds.* By RUTHERFORD MORISON, Professor of Surgery, Durham University. Oxford War Primers. London: Henry Frowde and Hodder & Stoughton. 1918. (2s. 6d. net.)

THIS small book has been written by request, as a war contribution, and is an account of what the author knows as regards this particular method of wound treatment. He holds that the method is "so simple that a *clever* surgeon is unnecessary for the achievement of the best results, though a *careful* one is essential;" and that the war has once more taught surgeons the value of Lord Lister's work on the use of antiseptics in the treatment of wounds.

Mr. Morison's conclusion (p. 9) is that if it is possible to get to the bottom of an infected wound so that it can be thoroughly cleaned mechanically, and suitable antiseptics be applied, the wound can be closed at once with interrupted sutures, always with impunity, and many times with the prospect of finding it healed when the dressing is removed for the first time at the end of three weeks. This fact establishes, he holds, a new principle in surgery.

In his summary of technique he gives the formula of an antiseptic paste, "Bipp," which he rubs well into the wound. Waiving the questions of the bacteriology and pathology of wounds, he offers clinical observations, the first of which is the absence of the ordinary signs of inflammation in wounds which have been so treated. Next he finds that catgut sutures, smeared with Bipp, are absorbed, showing that phagocytosis is not seriously interfered with by the antiseptic. Bipp would also appear to stimulate osteogenesis, a fact of importance

in fractures. In connection with the latter, he states that the results in war, as in civil cases, are not so good now as they were thirty years ago, when surgeons were less interested in the abdomen and more in the limbs. Accordingly, he formulates rules as a guide for the treatment of fractures. He thinks operations in fracture cases will be more frequently performed in the future: and that if his method of wound treatment be employed compound fractures may be safely and successfully plated.

The treatment of wounds of joints is given in some detail, and the results appear to be most satisfactory.

In the treatment of suppurating lymphangitis and cellulitis, results have been obtained which indicate the spreading effects of Bipp. This is confirmed by finding iodide of potassium in the urine during treatment.

The use of Bipp is not advisable at the Front: and for a first dressing the author recommends magnesium sulphate cream. Bipp can be used after the fourth day, after which time the danger of gas gangrene developing would appear to be small.

The question of poisoning from absorption of Bipp is gone into, and indications for the removal of the paste are given. In any case, excess of Bipp should always be removed from the wound.

This is a most interesting little book, and, like all Mr. Morison's writings, it is worth reading and digesting.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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EDITED BY GEORGE MACINTYRE.

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### M E D I C I N E.

**Treatment of Empyema.**—In the *Journal of the American Medical Association* (21st June, 1919), the treatment of empyema is discussed by Major W. T. Dodge. He refers to the differences of opinion that arose between the medical and surgical staffs of Military Base Hospitals as to the line of treatment to be adopted in this condition; the large proportion of fatal results following *early* surgical interference leading to reluctance on the part of the medical staff to transfer such cases to the surgical side. Free drainage *plus* the installation of Dakin's solution was tried, and in a later series a 2 per cent formaldehyde solution in glycerine was substituted. The medical service subsequently produced just as satisfactory results with single aspiration repeated at three-day intervals. Major Dodge's conclusions are as follows:—

1. The presence of fluid in the pleura is at first protective to the diseased lung, and it should not be removed at an early period, unless it is replaced in part by some other fluid.

2. If the fluid become purulent, it should be drained through a large tube introduced after a rib resection under a local anæsthetic, and under no circumstances should this procedure be adopted before the twelfth day of the disease, and so early as that only under exceptional circumstances.

3. Good results have not been obtained from the installation of irritating chemical solutions. If the drainage be inadequate, flushing with physiological normal saline solution is all that is required.—DOUGLAS K. ADAMS.

**Diagnostic Sign of Coma.**—Dr. E. D. Friedman (*ibid.*) describes unilateral anæsthesia of the cornea and conjunctiva as a diagnostic sign of coma due to hemiplegia (except, of course, in the case of profound coma, where all reflexes are abolished). He claims that in many such cases this has been the only sign of hemiplegia.—DOUGLAS K. ADAMS.

**Lobar Pneumonia.**—Dr. John H. McClellan (*ibid.*) urges the use of antipneumococcus serum (Kyes) in the treatment of lobar pneumonia. The serum is administered intravenously once or twice daily, the usual dose being 2.5 cc. In a series of 322 cases so treated the mortality was 25, or 7.7 per cent.

—DOUGLAS K. ADAMS.

**Hyperthyroidism.**—In the *Journal of the American Medical Association* (26th July, 1919), Professor O. W. McCaskey discusses the basal metabolism and hyperglycæmia tests of hyperthyroidism. The writer refers to the increasing evidence that other endocrine glands beside the thyroid play a more or less important rôle in exophthalmic goitre. "This is especially true with reference to the thymus, the importance of which would almost seem to justify the term 'thyroid-thymus syndrome.'" This view, he states, is supported by recent results from the operation of thymectomy.

The differential diagnosis of many mild, atypical, or early cases of thyrotoxicosis is unsatisfactory by ordinary clinical methods. Help in such cases can be obtained by investigation of (1) basal metabolism, and (2) alimentary hyperglycæmia. Basal metabolism can be rapidly estimated by Benedict's portable respiration apparatus. In hyperthyroidism there is an increase up to 100 per cent, according to the severity of the intoxication.

In every case of hyperthyroidism studied the blood sugar content was increased within two hours from 50 per cent to 200 per cent. This is possibly an indirect phenomenon, due perhaps to over-excitation of other organs. Professor McCaskey considers the application of these tests will probably reveal a much greater incidence of hyperthyroidism than has hitherto been recognised.

—DOUGLAS K. ADAMS.

**Prognosis in Renal Disease.**—Two cases reported by Dr. James P. O'Hare in the July number of the *Journal of the American Medical Association* are of considerable interest with view to the prognosis in cases of chronic renal disease. Both were cases of low renal function, as estimated by phenolsulphonaphthalein and estimation of the blood, urea, nitrogen, and both survived for a considerable number of years. At the ensuing discussion it was pointed out that even with our present functional tests we are unable to make accurate prognosis in these cases, owing to the difficulty of allowing for intercurrent disease. The two cases reported demonstrate the possibility of prolonged existence with an exceedingly small amount of renal tissue and an extremely low renal function. The clinical tests of renal function are of recent introduction, and they would appear to open up a valuable field of exploration.

—DOUGLAS K. ADAMS.

**Hypertension.**—In the *Journal of the American Medical Association* (August, 1919) Dr. David Riesman draws attention to the frequency with which hypertension occurs in women. He finds the condition most frequent in the fifth decade of life, chiefly amongst women who have borne many children. Constipation is an almost constant factor. The kidneys are apparently competent, and there is little evidence of arterial change. The writer states that "up to a point they show amazing tolerance to pressures of high degree," and cites one case where the S.B.P. = 310 m.m. Hg., the patient's only complaint being dizziness. The treatment advocated may be summarised under prevention, limitation of diet, and medicinal. He claims striking results from the use of *corpus luteum* extracts.—DOUGLAS K. ADAMS.

**Encephalitis Lethargica.**—In the *Journal of the American Medical Association* (5th July, 1919) Drs. Wedgeforth and Ayer publish reports on nine cases of encephalitis lethargica. The chief points may be summarised as

follows:—The onset of symptoms was always insidious—sore throat, diplopia, and fever being of especial significance. It was unusual to find signs of organic nervous disease in the first week of illness, and during this period the diagnosis was, of necessity, in doubt. During the second week cerebral symptoms appeared. Drowsiness was almost constant, frequently developing into coma, and at times alternating with a state of irritability or anxiety. Orientation and cerebation were usually unaffected till just before death. Ataxias, spasticities, the Babinski reflex and clonus all appeared in the series. The only symptoms and signs of a focal character were referable to the brain stem, and these were present in all. Diplopia was almost constant, though oculomotor palsy was but rarely observed. Weakness of the facial muscles, usually one-sided, occurred in five cases. Pupillary disturbances were common, and weakness of the jaw muscles was observed three times. The points on which the writers lay special importance are the insidiousness of onset, the recurrent and incomplete nature of the paralysis, and implication of cerebral nerves confined to motor function. No organisms were seen or grown, and the inoculation experiments were negative.—DOUGLAS K. ADAMS.

### *Books, Pamphlets, &c., Received.*

- Manual of Anatomy, Systematic and Practical, including Embryology. Originally written by the late A. M. Buchanan, M.A., M.D., C.M., F.R.F.P.S. Glasg. Fourth edition, edited by a Committee of Anatomists in London. With 677 illustrations, mostly original and in colours. London: Baillière, Tindall & Cox. 1919. (30s. net.)
- A Handbook of Gynæcology for the Student and General Practitioner, by Bethel Solomons, B.A., M.D. Univ. Dub., F.R.C.P.I. London: Baillière, Tindall & Cox. 1919. (10s. 6d. net.)
- Essentials of Surgery: A Textbook of Surgery for Students and Graduate Nurses and for those interested in the Care of the Sick, by Archibald Leete McDonald, M.D. With 46 illustrations. London: J. B. Lippincott Company. (8s. 6d. net.)
- The Simple Carbohydrates and the Glucosides, by E. Frankland Armstrong, D.Sc., Ph.D., F.I.C. Third edition. London: Longmans, Green & Co. 1919. (12s. net.)
- Fractured Femurs: Their Treatment by Calliper Extension, by Maurice G. Pearson, O.B.E., M.B., B.Sc.Lond., F.R.C.S., and J. Drummond, M.D., M.R.C.P.Edin. London: Henry Frowde and Hodder & Stoughton. 1919. (10s. 6d. net.)
- The Exact Diagnosis of Latent Cancer: An Enquiry into the true significance of the Morphological Changes in the Blood, by O. C. Gruner, M.D. London: H. K. Lewis & Co., Limited. 1919. (7s. 6d. net.)
- A Manual of Physics, by J. A. Crowther, Sc.D. London: Henry Frowde and Hodder & Stoughton. 1919. (16s. net.)

- Mind and its Disorders: A Textbook for Students and Practitioners of Medicine, by W. H. B. Stoddart, M.D., F.R.C.P. Third edition. With illustrations. London: H. K. Lewis & Co., Limited. 1919. (18s. net.)
- The Essentials of Chemical Physiology, for the use of Students, by W. D. Halliburton, M.D., LL.D., F.R.S. Tenth edition. With coloured plate. London: Longmans, Green & Co. 1919. (7s. 6d. net.)
- Dementia Præcox and Paraphrenia, by Professor Emil Kraepelin, of Munich. Translated by R. Mary Barclay, M.A., M.B. Edited by George M. Robertson, M.D., F.R.C.P.Edin. Edinburgh: E. & S. Livingstone. 1919. (15s. net.)
- The Principles of Gynæcology: A Manual for Students and Practitioners, by W. Blair Bell, B.S., M.D.Lond. Third edition. London: Baillière, Tindall & Cox. 1919. (38s. net.)
- An Introduction to General Physiology, with Practical Exercises, by W. M. Bayliss, M.A., D.Sc., F.R.S. Longmans, Green & Co. 1919. (7s. 6d. net.)
- On Facial Neuralgia and its Treatment, with Especial Reference to the Surgery of the Fifth Nerve and the Gasserian Ganglion, by J. Hutchinson, F.R.C.S. London: John Bale, Sons & Danielsson, Limited. 1919. (15s. net.)
- Inguinal Hernia: The Imperfectly Descended Testicle and Varicocele, by Philip Turner, M.S., F.R.C.S. With 22 illustrations. London: J. & A. Churchill. 1919. (9s. 6d. net.)
- An Atlas of Dental Extractions, with Notes on the Causes and Relief of Dental Pain. Designed for the Use of Medical Students and Practitioners, by C. Edward Wallis, M.R.C.S., L.R.C.P., L.D.S. Second edition. With 11 plates. London: J. & A. Churchill. 1919. (5s. net.)
- Organic Chemistry for Students of Medicine, by James Walker, LL.D., F.R.S. Second edition. London: Gurney & Jackson. 1919. (10s. 6d. net.)
- A Manual of Midwifery, by Thomas Watts Eden, M.D., C.M.Edin., F.R.C.P.Lond., F.R.C.S.Edin., Major, R.A.M.C. Fifth edition. With 5 plates and 369 illustrations in the text. London: J. & A. Churchill. 1919. (24s. net.)
- A Dictionary of Treatment, including Medical and Surgical Therapeutics, by Sir William Whitla, M.A., M.D., LL.D., M.P. Sixth edition. London: Baillière, Tindall & Cox. 1920. (25s. net.)
- Venereal Disease: Its Prevention, Symptoms, and Treatment, by Hugh Wansey Bayly, M.C. With 54 illustrations. London: J. & A. Churchill. 1920. (10s. 6d. net.)
- Post-mortem Manual: A Handbook of Morbid Anatomy and Post-mortem Technique, by Charles R. Box, M.D., B.Sc.Lond., F.R.C.P.Lond., F.R.C.S.Eng. Second edition. With 22 illustrations. London: J. & A. Churchill. 1919. (8s. 6d. net.)
- Manual of Diseases of Children, by James Burnet, M.A., M.D., M.R.C.P.Edin. Second edition. Edinburgh: E. & S. Livingstone. 1919. (8s. 6d. net.)
- Leçons de Pathologie Digestive (Quatrième Série), par M. Loéper. Paris: Masson et Cie. 1919. (11 fr. net.)
- Toxines et Antitoxines, par M. Nicolle, E. Césari, C. Jouan. Paris: Masson et Cie. 1919. (5 fr. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDED 20TH DECEMBER, 1919.**

	WEEK ENDING			
	Nov. 29.	Dec. 6.	Dec. 13.	Dec. 20.
Mean temperature, . . .	39·0°	40·9°	39·9°	43·0°
Amount of rainfall, . . ins.	1·07	1·35	0·65	0·85
Deaths (corrected), . . .	336	334	284	281
Death-rates, . . . . .	15·7	15·6	13·2	13·1
Zymotic death-rates, . . .	0·4	0·6	0·5	0·5
Pulmonary death-rates, . .	5·2	5·0	3·5	3·1
DEATHS—				
Under 1 year, . . . . .	63	43	50	54
60 years and upwards, . .	108	111	81	89
DEATHS FROM—				
Small-pox, . . . . .	...	...	...	...
Measles, . . . . .	4	10	2	3
Scarlet fever, . . . . .	3	1	3	2
Diphtheria, . . . . .	3	2	5	5
Whooping-cough, . . . .	...	1	1	...
Enteric fever, . . . . .	...	...	...	...
Cerebro-spinal fever, . . .	1	...	...	...
Diarrhoea (under 2 years of age),	8	3	3	6
Bronchitis, pneumonia, and pleurisy, . . . . .	95	94	61	57
CASES REPORTED—				
Small-pox, . . . . .	...	...	...	...
Cerebro-spinal meningitis, .	7	2	7	2
Diphtheria and membranous croup, . . . . .	53	46	46	44
Erysipelas, . . . . .	40	43	27	39
Scarlet fever, . . . . .	116	118	97	106
Typhus fever, . . . . .	...	...	...	...
Enteric fever, . . . . .	2	2	...	...
Phthisis, . . . . .	26	35	49	27
Puerperal fever, . . . . .	5	8	4	4
Measles,* . . . . .	236	221	168	172
Ophthalmia neonatorum, . .	17	29	14	13

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

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No. 2. FEBRUARY, 1920.

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THE ROYAL MEDICO-CHIRURGICAL SOCIETY  
OF GLASGOW.

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CENTENARY CELEBRATION.

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THE centenary of the Medico-Chirurgical Society, Glasgow, was celebrated at a commemorative banquet in the Grosvenor Restaurant, Gordon Street, Glasgow, on Wednesday, 17th December, 1919. Mr. A. Ernest Maylard, President of the Society, occupied the chair, and a large and distinguished company was present, including, as guests of the Society, Sir Thomas Dunlop, Bart., G.B.E., LL.D., ex-Lord Provost of Glasgow; Sir Donald MacAlister, K.C.B., &c., Principal, University of Glasgow; Sir Humphry Davy Rolleston, K.C.B., &c., President, Royal Society of Medicine, London; Sir Harold J. Stiles, M.B., F.R.C.S.Edin., Professor of Clinical Surgery, Edinburgh University; A. O. M. Mackenzie, Esq., K.C., LL.D., Sheriff of Lanarkshire; Dr. George Mackay, F.R.C.S.Edin., President, Royal College of Surgeons, Edinburgh; Professor G. Lovell Gulland, C.M.G., M.D., &c., Edinburgh University; Emer. Professor Francis M. Caird, F.R.C.S.Edin., President, Edinburgh Medico-Chirurgical Society; Professor F. O. Bower,

F.R.S., P.R.S.E., &c., Glasgow University; Dr. John C. M'Vail, F.R.F.P.S.Glas., Commissioner and Depute Chairman, National Health Insurance, Scotland; Professor Lewis R. Sutherland, M.B., University of St. Andrews; James Andrew, Esq., Dean of Faculty of Procurators, Glasgow; Dr. John Playfair, F.R.C.P.Edin., late President, Edinburgh Medico-Chirurgical Society; Professor J. Graham Kerr, F.R.S., &c., Glasgow University; Professor G. G. Henderson, F.R.S., &c., Glasgow University; Wm. A. Lethem, Esq., M.B., D.P.H., President, Royal Medical Society, Edinburgh; Thomas S. Sargent, Esq., President, Glasgow University Medico-Chirurgical Society; Walter Hurst, Esq., F.L.A., Assistant Secretary and Librarian, Royal Faculty of Physicians and Surgeons, Glasgow.

Among those present were also the Rev. Professor Milligan, Dr. James A. Adams, Dr. W. L. Reid, a past President of the Society; Professor Robert Muir, a past President of the Society; Sir Kennedy Dalziel, Dr. A. K. Chalmers, Professor W. K. Hunter, Dr. Ebenezer Duncan, Professor Glaister, Professor J. H. Teacher, Professor Munro Kerr, Mr. James H. Nicoll, Dr. A. Maitland Ramsay, Dr. John Macintyre, Dr. Robert Jardine, Mr. R. H. Parry, Dr. J. Nigel Stark, and Dr. W. R. Jack.

The croupiers were—Dr. Douglas W. Russell, Mr. Thomas Kay, Dr. James H. Martin, Dr. J. Souttar M'Kendrick, Mr. Archibald Young, Dr. R. Speirs Fullarton, Dr. J. Ewing Hunter, and Dr. John F. Fergus.

After dinner, the Chairman, in submitting the toast of "His Majesty the King," said—In proposing this toast, gentlemen, I venture to think that none will receive it more cordially than the members of this Society. May I read to you a letter which I received only last Saturday from the Secretary for Scotland, Mr. Munro. He writes—

"I have it in command to acquaint you that His Majesty has been graciously pleased to direct that the Society shall be known henceforth as 'The Royal Medico-Chirurgical Society of Glasgow.'"

Gentlemen! The King!

The GENERAL SECRETARY (Mr. Archibald Young) intimated that letters of apology, accompanied in many cases by con-

gratulatory messages, had been received from the following gentlemen:—The Right Hon. The Earl of Rosebery, K.G., K.T., Chancellor of Glasgow University: M. Raymond Poincaré, Lord Rector of the University of Glasgow: The Right Hon. A. Bonar Law, P.C., LL.D., Lord Rector of the University: The Hon. The Lord Provost of Glasgow (Mr. J. W. Stewart); The Director General, Army Medical Service, Lieutenant-General Sir T. H. J. C. Goodwin, K.C.B., &c.: Major-General Sir Wm. B. Leishman, K.C.M.G., F.R.S., &c., Army Medical Service; Sir Walter Morley Fletcher, K.B.E., F.R.S., Secretary, Medical Research Committee; Sir James A. Ewing, K.C.B., &c., Principal, Edinburgh University: The Very Rev. Sir John Herkless, D.D., Principal, St. Andrews University: John Yule Mackay, M.D., LL.D., Principal, University College, Dundee: Dr. Norman Moore, F.R.C.P., President, Royal College of Physicians, London; Sir George H. Makins, G.C.M.G., F.R.C.S., President, Royal College of Surgeons, England; Sir Robert W. Philip, M.D., F.R.C.P. Edin., President, Royal College of Physicians, Edinburgh; Dr. A. Freeland Fergus, P.R.F.P.S.G., a past President of the Society; Sir William Osler, M.D., F.R.S., F.R.C.P., Regius Professor of Medicine, Oxford; Sir T. Clifford Allbutt, M.D., F.R.S., F.R.C.P., &c., Regius Professor of Medicine, Cambridge; Sir James Mackenzie, M.D., F.R.C.P., &c., St. Andrews; Cuthbert S. Wallace, C.B., C.M.G., M.B., B.S. Lond., St. Thomas' Hospital, London; Sir James Leishman, Chairman, National Health Insurance, Scotland; Professor H. Alexis Thomson, C.M.G., Edinburgh University; Professor T. K. Monro, M.D., Glasgow University; Professor T. H. Bryce, M.D., F.R.S.E., &c., Glasgow University; Professor D. Noël Paton, M.D., F.R.S., &c., Glasgow University; Dr. C. O. Hawthorne, F.R.F.P.S.G., &c., London; Dr. W. G. Dun, F.R.F.P.S.G., a past President of the Society; Sir Robert Bruce, J.P., Editor, *Glasgow Herald*; A. S. Hedderwick, Editor, *Glasgow Citizen*; Dr. Donald M'Phail, Coatbridge, a Vice-President of the Society; Dr. J. M'Gregor Robertson, Mr. Henry Rutherford, Dr. George Halket, Dr. John Ritchie, Dr. J. D. Maclaren, Elie, &c.

I would like, said Mr. Young, specially to refer to the last on the list, Dr. J. D. Maclaren, now residing in Elie, who has sent the following letter:—



DUNREGGAN, ELIE, 9th September, 1919.

DEAR MR. YOUNG,—I much regret that owing to my great age I shall not be able to attend the Centenary Banquet of the Medico-Chirurgical Society of Glasgow, to be held on 3rd October next. I wish much success to the gathering and to the Society.—With kind regards, Yours very truly,

J. D. MACLAREN.

It may be of interest to the members of the Society—it certainly will be of interest to the guests—to know that Dr. Maclaren joined the Society as far back as the year 1857, so that he has been a member of the Society for sixty-two years. I would propose that a message of congratulation be sent to him from the Society on this occasion. (“Agreed.”)

Dr. JAMES A. ADAMS proposed “The City and University of Glasgow.” He said—

It may appear somewhat strange to those present, to see the City of Glasgow and the University of Glasgow coupled together in the same toast; but if you regard it for a short time, you will see that it is a very proper and right arrangement. If you take the mottoes of the two Corporations, as I think I may call them, you will find that in the one case it is “Let Glasgow flourish by the Preaching of the Word,” and in the other “Via, veritas, vita” (the Way, the Truth, the Life). That would seem to show almost a common origin to a certain extent. It shows, at all events, that there has been a deep religious feeling at the commencement of the careers of these institutions. That is very different from what I once witnessed in one of the large cities of Portugal. Going out one day, and walking along the street, I saw a number of children with a medal on their breasts, and on that medal was inscribed “There is no God.” Now, gentlemen, I think that unless we have a thorough belief in the great Architect of the world we cannot thrive or succeed in anything we try to do, and we cannot feel true happiness. I feel in my own mind well assured of the success of the two bodies, and I am going to ask you to think that their prosperity is due largely to the deep religious feeling behind them. For the last thirty odd years it has been my lot to travel almost daily to the Royal Infirmary, and in passing up

to the doors of that hospital I have had to pass through streets that bear the names of Rottenrow, Glebe Street, and the Vicar's Walk, and other names. These are all reminders of the past, and I have always felt that I was walking on the plane stones of the Glasgow of the old days. And coming up through these streets, gentlemen, we come to the venerable Cathedral which our forefathers founded, and which was preserved when other ecclesiastical buildings were swept away. Of course, where now is the noble and beautiful Royal Infirmary at one time stood, as you know, the Bishop's Palace. And, flowing past the Bishop's Palace and the Cathedral, there was the Molendinar Burn, which I remember, and in which the friars were said to fish on Thursdays for their Friday dinners. That Burn flows down to the Clyde, and, when we come to the Clyde, we find what made Glasgow. We come to the River Clyde, and we find that the prosperity of Glasgow has depended in the past, and depends now very largely on the River Clyde. You remember the story of the Scotsman who was pointing out to an American friend the beauties and the wonders of the Clyde. The American looked with a lack-lustre eye, and said that if he wanted to see a river, he should see Niagara. "That's all right," replied the Scotsman, "the Almighty made Niagara, but Glasgow made the Clyde." The amount of labour expended on the Clyde by the Corporation and the City of Glasgow is almost incredible. We used it for our water supply at the beginning, and in consequence of epidemics of cholera and typhus which attacked the city, the city fathers, in their wisdom and with far sight, began to look for a source of water supply elsewhere, and with Napoleonic view, fixed their eyes on Loch Katrine, and went through what was then the gigantic engineering feat of bringing water to Glasgow. In consequence of that we possess the purest and largest supply of water, probably, of all the cities in this country. Of course it did not please every one. You remember the old Scotch lady who objected to the change from the Clyde to Loch Katrine because it took far more meal to make the porridge in the morning. I have no desire to detain you, but I should like to recall that, in addition to bringing the water from Loch Katrine, the city fathers of the day had many difficulties to contend with—proprieters' rights, for instance: and that reminds me of an amusing incident that happened in

reference to Loch Katrine water. There was a great dispute as to the effect of the water passing through the pipes, and some claims were made by proprietors near Loch Katrine for damage done. Sir Thomas Dunlop will be able to tell you something about that. Well, Professor Fred Penny, Professor in Anderson College, and my father, went up to Loch Katrine to inquire into the destruction of the amenities which was said to have taken place. Riding up Glen Gyle they were received by the Macgregor, who, according to the old Highland custom, presented them each with a glass without a stem. My father managed to drop his whisky without being seen by the Macgregor, but Professor Penny had to drink the powerful stuff to the last drop. My father, thinking to compliment their host, congratulated him on being descended from Rob Roy. The Macgregor drew himself up and said, "Excuse me, sir, Rob Roy is descended from me; I am the Macgregor." That was the spirit of the old Highland chieftains. When we come to the other things the city has done, we find that their work in electricity is very good. Our car service is excellent, but evidently in danger of becoming obsolete. I was going to say something about gas, but I think we had better leave it at that. I have always in my mind, in thinking of the Corporation of Glasgow, the picture drawn by Sir Walter Scott of Bailie Nicol Jarvie and his father the Deacon before him. These were upright, honest, strong-minded, pugnacious men, men of far views, as is evidenced by the progress of the city. My experience and knowledge of Glasgow is getting on to nearly half a century, and I have known many of the Lord Provosts in that time, and the great majority came up to that standard. I am pleased, in asking your acceptance of this toast, to be able to couple it with the name of Sir Thomas Dunlop, principally for the reason that I have a feeling that in the late war we have done a great deal to help our country. And when I think of Sir Thomas, I often think of the story told me by an English officer travelling up from England and sitting opposite a young fellow in khaki. The officer said to him, "I see you come from Scotland." "Ay," replied the young fellow, "Glesca." "Well," said my friend, "Glasgow has done well in this time." "Ay," was the response, "it saved the situation." That was the opinion of that Glasgow man that he had saved the situation.

Now I am satisfied that in Glasgow one of the men who did save the situation was Sir Thomas Dunlop. He was the right man in the right place. He was indefatigable in every way. He worked in every sphere, and I have an intense admiration for him and the work he did. I have known him most of our lives. We were fellow-volunteers in the old 1st Lanark. I would like just to give one illustration of the interest Sir Thomas takes in the welfare of the city. When I was President of the Royal Faculty of Physicians and Surgeons, I was approached in that capacity by a number of surgeons who wanted something done to make provision for those unfortunate enough to lose their limbs. There was a good response to the call, and Sir Thomas Dunlop met us in the most ready way. We had a meeting with him in the Council Chambers, at which many thousands were subscribed, and after that meeting we got a magnificent estate at a cost of £300,000, on which to make provision for the training of limbless men in their trades. That was very largely due to Sir Thomas Dunlop.

In approaching the question of the University I should like to indulge in a little retrospect. I commenced there over forty years ago as a student. At that time medicine was undoubtedly the strongest branch, as represented by the late Sir William Gairdner, whom many of you knew not only as a great teacher of medicine but also as a man of cultured and refined character. I do not remember Lister, I am sorry to say, but he left behind him one or two of his disciples in Glasgow. One of them is Sir Hector Cameron, and another Sir William Macewen. These two were keen enthusiasts in the cause of their chief. They have done well for the University of Glasgow. They have trained a large number of surgeons, now scattered all over the world, to spread the fame of Glasgow as a surgical centre. I think we owe a deep debt of gratitude to them. We have in Glasgow many capable and skilful surgeons. Even in the presence of our friends from Edinburgh I would be almost inclined to say that we are as now as good as the Edinburgh School—if, indeed, we do not surpass them. Now, gentlemen, I would not care to say much more, but there is one thing I would like to mention, and that is the work done in the pathological department.

I have to couple this part of the toast with the name of the Principal, and I approach Sir Donald, like Shylock,



“with bated breath and whispering humbleness.” His knowledge and work in every sphere are almost incredible. We here owe a deep debt of gratitude to Sir Donald. While, in my time, we all looked up to Caird, we have to-day one of our very own, a doctor unsurpassed in authority and knowledge in his profession. Sir Donald, as head of the school here, has done everything he could, not only to help the school, but to help men leaving the school, and at that time men require a word of encouragement. I am quite sure that the name of Sir Donald MacAlister is well known in the medical profession, shall I say, from Tarbet to Torquay.

Sir THOMAS DUNLOP, replying to the toast on behalf of the City, said that he had been asked to do so because the true centenary of the Society occurred in 1914, when he was Lord Provost, and although its celebration had been postponed on account of the war, it was felt that the Lord Provost of 1914 should represent the City on this occasion. He deeply felt the honour done him by those who had thus asked him to become five years younger than he would otherwise have been. He would like to put a problem to the mathematicians of the Society—perhaps Sir Donald MacAlister might solve it:—If one were annually asked to a centenary banquet five years behind its time, and became on each occasion five years younger, how long would one take to become a centenarian?

The proposer of the toast had risen to a high ideal in showing the religious foundation on which both the civic and the University life of Glasgow rested, and the speaker welcomed the innovation in the toast list which linked together the University and the Town Council of Glasgow. The object of the University education presided over by Sir Donald MacAlister was the right guidance of youth, and in that object the Corporation and the city were equally interested. It was to be hoped that higher education would not lead to neglect of the affairs of the city and the state, as it seemed at present to be doing, but would in the future stimulate to a greater interest in these vital subjects. More action was needed, and less talk. The city had done well during the war, and the medical profession could do much to maintain and increase its prosperity and its health. The problem of housing was the most acute at present before them, and he

trusted that the profession would upon that question inspire and educate the people on lines which should be a stimulus, and not a curb, to enterprise.

Sir DONALD MACALISTER acknowledged the toast on behalf of the University. He said—

I positively decline the mathematical problem proposed to me by Sir Thomas Dunlop, without pencil, a lot of paper, and plenty of time. It occurs to me, however, that I might offer a suggestion to him as to the lines along which a solution might be found, if I point out to him that, in celebrating the centenary of the Society on the 105th anniversary, you are proceeding in a perfectly professional way. The proportion between 105 and 100 is the proportion between a guinea and £1. That is our equivalent. When a doctor is asked by a patient, "What shall I make out a cheque for? £100?" he invariably replies, "£105, please." Therefore, I see nothing inappropriate in your celebrating the centenary on this evening. I am very proud to have the opportunity of replying to this toast at this dinner, especially for the reason that I am able to congratulate the Society on the mark of Royal favour which has been announced by our President to-night. This is the second occasion since I came to Glasgow on which such a mark of Royal favour has been bestowed upon a Glasgow Corporation. First, the Royal Faculty, some years ago, and now your Society. As President of the General Medical Council, I do not think it is divulging any secret when I say that I am sometimes consulted by the authorities on such questions, and on one occasion on which I was consulted I got a letter which said—I paraphrase it—"As President of the Medical Council, we want to know what you think of such and such a proposal. We know you are a Cambridge man, so you will be unbiassed." I wrote back—"I am a Glasgow man, and I am unbiassed. There is no question that any mark of Royal favour bestowed on a Glasgow institution is certain to be well bestowed." I am very happy, indeed, to think that that was the view that was taken in the highest quarters. I am also glad for two other reasons. The first is, that it brings you into line with the great society in London now known as the Royal Society of Medicine, but for many a long year known as the Royal Medico-Chirurgical

Society. There is another reason. It happens that in Glasgow there are two Medico-Chirurgical Societies. Until this evening there was one composed of the students at the University, and there was your own Society. Any confusion between them will now be avoided. I believe the students' Medico-Chirurgical Society will still be proud to be called the Glasgow University Medico-Chirurgical Society, and, although I believe it is not inferior in any way to this Society in point of age, confusion will no longer be possible to any one who knows the history which has begun this evening. The Royal Medico-Chirurgical Society of Glasgow will take its place, marked by the prefix which the King has so graciously bestowed upon it. I am also pleased that my friend, Dr. Adams, has proposed the toast. For thirty-seven years, as student, teacher, and assistant lecturer, he has been associated with the Medical School and Centre in the University, and the long period of his connection with the school gives weight to all he says about its history and about its aims. I take very kindly, and I am sure my colleagues of the University will gratefully acknowledge, the warmth of the expressions which one who knows the whole school from the inside has been able to use about it. He referred to the common origin of the City and the University. Well, of course, if—I understand there is some legal doubt about it—if the daughter is a relation of the mother, then there is a common kinship between the City and the University. I need not remind Sir Thomas Dunlop that the University was there before the City, and that, for over two hundred years, the University authorities appointed the Provost and the Bailies of the City. If there has been any of the falling off that Sir Thomas has indicated in the character and the composition of the Corporation, I merely mention the fact that the University ceased to be responsible for that some years ago. I take no personal responsibility for any change that has come over the Corporation since that privilege ceased to be exercised. But we in the University recognise the long standing connection between the City and the University, by always putting this toast—which is no innovation at Gilmorehill, gentlemen—in this form in our toast lists. The City and the University is one toast there, because we realise, as any one who knows Glasgow life realises, that the City and the



University are, and have been throughout their history, indissolubly linked together for usefulness. Although Glasgow University is a national—I might almost say an international—institution, it has not ceased to be a civic and a local one. Special reference has been made by Dr. Adams, as was natural, to the development of the Medical School connected with Glasgow University. Since I came here twelve years ago, I have watched that development with the very greatest interest and with the very greatest faith in its future; and again, as President of the Medical Council, I had an opportunity only the other day of scanning what is called the Medical Students' Register for the past year. I found that, judging by the number of new students who were entering the school during the year, Glasgow was about one hundred ahead of any other single medical school in the United Kingdom. And, gentlemen, we are out to keep it in that place if we possibly can. Sir Thomas Dunlop suggested—by what, I am quite prepared to accept his assurance, was a slip of the tongue—that while there are some strong professors, there are others who are more ordinary. I quite admit that distinction. The strong professors are in Glasgow; the others are elsewhere. But we are doing our best to make “elsewhere” as strong as we are, because Glasgow is no longer a centre for the training of undergraduates only; it is also a centre for the training of professors. Within the last few months something like fifteen of those who have been trained in Glasgow, and have gained experience as teachers and investigators there, have been made professors in less favoured universities both at home and abroad. Of the fifteen, quite a number have gone overseas into other countries. That is the true test of the product of a university. I have heard it said that the true test of the success of a foreign mission, to China or India as the case may be, is not the number of baptisms, but the number of ordinations among the natives; that a foreign mission ought to aim at making itself unnecessary by training ministers to carry on the work among their own fellow countrymen. We are attempting that higher service, the production of professors for “elsewhere,” and not the production of undergraduates. But there is one function that I think Glasgow will have to undertake in virtue of this very international position of which I am speaking. We have a



great undergraduate school of medicine, with all the best resources, clinical and otherwise; but we must become a post-graduate school as well. As chairman of the University Bureau of the British Empire, I am every day receiving applications, from mutually friendly countries, from those who desire, after graduating in their own universities, to come to study at British universities; and very many of them want to come to Scottish universities. They want to come because they believe that here they can pass to a higher state of knowledge and obtain a wider culture than they can in their own countries. Formerly, those students went to German and other universities abroad to get the final polish. That is at an end, and they are looking to us to fill the place. We must rise to the height of that responsibility. Already we have shown, by certain emergency courses which we have established, and which have met with very great success, that we have the material, and that, if they had the time, our teachers have the willingness to develop such work. But something more must be done to enable us to do that. We want the support of the whole profession in Glasgow, and I am sure that the members of the Royal Medico-Chirurgical Society will do all they can to assist us.

The PRESIDENT—We cannot, gentlemen, meet together on such an occasion as this without our thoughts being carried to those who, but for the war, might possibly have been with us to-night. We, like so many other societies and public bodies, have lost good comrades. We recall the sacrifices they made for King and Country with feelings of pride, and with a sense of gratitude which words entirely fail to adequately express. We can never repay the debt we owe them; but we will put their names in, what we may hope will prove, the imperishable records of our Society, that they and their deeds may be remembered for all time to come. I ask you, gentlemen, to do honour to their memory by standing while I read their names.

Captain ROBERT INGLIS BINNING, M.B., Glasgow, Indian Medical Service. Life Member of the Society, 4th November, 1910. On Service in France for a year; later in Mesopotamia. Died of fever at Basra, Persian Gulf, 16th August, 1916.

ALEXANDER H. CASSELLS, M.B., Glasgow, Royal Navy. Member of

Society, 6th May, 1910. Served at Sea all through the War. Died at St. Nazaire, while Senior Medical Officer of a large Transport, on 17th October, 1918, of influenza.

Captain A. T. CAMPBELL, M.B., R.A.M.C. Member of the Society, 1892. On Duty at Maryhill. Died 22nd February, 1916.

Major ALEXANDER JOHNSTON, M.D., Glasgow, R.A.M.C. Member of the Society, 13th December, 1912. Placed his services at disposal of the War Office early in the War; was appointed to Command Thornhill Military Hospital, Aldershot. Died on 22nd September, 1918.

Captain CHARLES K. MCKERROW, M.B., B.C.Cantab., R.A.M.C. Member of the Society, 16th December, 1910. Went on Service in May, 1915. Served in France. Killed in Action, 20th December, 1916.

Major J. HART McNICOL, M.C., M.B., Glasgow, R.A.M.C. Member of the Society, 3rd November, 1911. Joined the Army at outset of the War. Served in France and in Macedonia. Died of pneumonia, in Macedonia, on 8th October, 1918.

The toast of "The Society" was proposed by the PRESIDENT (Mr. A. E. Maylard), who said—

Before, gentlemen, I ask you to honour the toast of future prosperity to our Society, I think it would be fitting on such an exceptional occasion as this, and, indeed, quite in keeping with the sentiment which naturally animates us in commemorating the centenary of our Society, for me to give a short account of the early doings of the Society and of those worthy members of it who have contributed so largely to its past and present success.

As a first instalment, then, I cannot do better than read the minute of the first meeting held (and unfortunately it does not record where) on 27th October, 1814:—

By mutual agreement the following gentlemen were present:—  
Dr. Robert Watt, Dr. Robert Graham, Dr. John Robertson, Mr. Granville S. Paterson, Mr. John Young, Mr. George McLeod. Dr. Watt was unanimously voted to the Chair.

The following resolutions were agreed on:—

That the Society be nominated "The Glasgow Medical and Surgical Society."

That the Society be exclusively for the prosecution of Medical Science.

That a paper or essay be read at each meeting ; the subject of said paper or essay alone be discussed during that meeting. But that four quarterly meetings be allotted for the discussion of the then prevalent diseases, and those which have occurred during the three preceding months.

That an Annual President, two vice-presidents, treasurer and secretary be elected by vote.

A Committee of three was then resolved on. Dr. Watt, Dr. Graham, Dr. Robertson were chosen, and ordered to draw up a series of Laws to be presented to the consideration and amendment of the Society at the next meeting.

It was further resolved on :—

That entry money, a fine for want of paper or essay, and a fine for absence or being late be levied ; and

That a meeting of the Society take place on the 4th of November.

At the third meeting of the Society held on the 15th November, “it was resolved that the name of the Society be altered to that of the Glasgow Medical Society.” At this meeting also it was moved that application be made to the Faculty of Physicians and Surgeons for the use of their Hall ; and it may be incidentally remarked here that, from that date to this, the Society has enjoyed the unbroken privilege accorded it by the Royal Faculty of continuing to meet in its premises. It was at this same meeting, further, that the Laws of the Society were approved ; and I think it will interest you not a little to learn under what stringent regulations our worthy predecessors exercised the privileges of membership. I give you just a few extracts :—

Section II (Office Bearers) No. 6 : Where a Member disturbs the peace of the Society, and does not conform to the Laws, the President shall have the power of dissolving the meeting, and ordering a Committee for the consideration of the Member’s conduct.

Section III (Ordinary Meetings) No. 3 : The roll shall be called. Such as are absent shall incur the fine of 2s. unless sick or three miles distant from town ; one half to be remitted on the Member entering the room within half an hour after the business has commenced.

No. 7 of the same Section—No Member shall speak twice till all have had an opportunity of speaking once ; nor thrice till all have had that opportunity twice ; after which Members may speak in the order in which they present themselves to the President. Members must speak standing.

As regards the strictly professional business of the Society the Rules go on to provide that:—

1. Essays must be read by Members in rotation.

3. The Subject must be submitted to the Society for approval two months before being read under a penalty of 10s. 6d. and cannot be changed without permission and the payment of a fine of 5s.

4. Any Member who is allowed to take for his substitute a resident Member shall pay for the indulgence the fine of 5s.

6. The Essay must be given to the Secretary the meeting previous to its being read in order that Members may have the opportunity of seeing it before the discussion.

7. If not so given the Essayist shall incur the penalty of 10s. 6d. ; if not read on the night it is due, he shall pay one guinea additional ; if he does not read it at the second Meeting, two guineas more ; if not at the third he shall cease to be a Member of the Society.

It was at the sixth Meeting of the Society on the 3rd January, 1815, that the first strictly professional business was transacted ; and this as minuted consisted in—"Conversations on the late prevalent diseases." It should be stated that this particular subject was introduced in conformity with Rule 5, Section III, which stipulated that "At first meetings in January, April, July and October, no paper shall be read, but the prevalent diseases of the preceding three months shall be discussed."

On 17th January, 1815, the first essay was read by Dr. Robert Graham, his subject being "Cases of Irregular Hysteria." Thereafter, for many years until 1845, essays were regularly read at each meeting. These essays, which are in manuscript, have all been bound, numbering thirty-one volumes. They are in the Library of the Royal Faculty of Physicians and Surgeons. I confess, gentlemen, in reading over these old minutes, and some of the essays compiled by men as distinguished as any of the present day, any man might be justly excused for expressing the feelings of pride he experienced in being President of such a Society. In passing this eulogium upon the Society, let me add one incident in its career that will amply indicate the high ideals to which it aspired and the prominent position which it held in relation to other literary and scientific Societies in the



city. Dr. Robert Perry, at a meeting of the Society on 20th March, 1838, moved that "a Committee be formed to co-operate with the other scientific and literary bodies in Glasgow, in inviting the British Association for the Advancement of Science to visit Glasgow." The delegates met and unanimously agreed to send an invitation. This was accepted, and the Association visited Glasgow in 1840.

Reverting to a somewhat earlier period in the Society's transactions it is of interest to note that, at the eighty-sixth meeting held on 19th October, 1819, just a hundred years ago, the Treasurer's accounts appear for the first time in the minutes. There is a delightful succinctness about the record which I am sure will appeal to the present worthy successors of these early office-bearers; for the minute reads thus:—

Total Receipts,	.	.	.	.	.	.	£20 18 8
Total Expenditure,	.	.	.	.	.	.	5 0 7½
							<hr/>
Balance transferred to New Account,	.	.	.	.	.	.	£15 18 0½

But possibly the post of Treasurer of these bygone days was not one to be altogether envied, however light the duties might appear from the brief record of them; for, unless the holder of that post were a gentleman possessed of exceptional stock-broking propensities, who knew how safely to invest money at a fairly high rate of interest, he was as likely as not to be out of pocket at the end of his period of office; because the conditions under which the post was held required that the Treasurer should pay interest at the rate of 3½ per cent for the balance of cash in his hands.

The funds of the Society appear to have been not a little added to by the fines which were imposed upon members for non-compliance with the Rules. In the Treasurer's return for the Session 1834-35, these fines amounted to no less a sum than £11, 9s. 6d.; and another minute of 19th January, 1841, bears the statement that "Dr. Hannay paid £5, 0s. 0d. for fines due by him to this date."

In 1846 the minutes assume quite a different character. They no longer simply record the reading of essays, but indicate that these set essays were replaced by contributions much on the same lines as now presented to the Society; and

the discussions which ensued on these contributions are, in many instances, most fully reported. The minutes, therefore, become frequently most interesting reading. Take for instance the discussion which followed upon a paper by Dr. Lyon on an epidemic of measles. The discussion became almost acrimonious between those who advocated, as did Dr. Robert Perry, the giving of whisky and sulphur, and those who preferred the frequent recourse to blisters.

Another very interesting minute records a discussion which took place on the value of chloroform as an anæsthetic shortly after its introduction. Thus, one member is reported to have said that he tried it on his own person and found that it produced "indistinct consciousness." Another member "feared that its use would not be so extensive nor its benefits so certain as was commonly alleged. In several cases very disagreeable and alarming effects had been produced, such as sickness, vomiting, great prostration, continued insensibility and convulsions resembling epileptic seizures." A third member stated that "so far as he had heard of the new remedy he thought few of the members would feel disposed to use it in their own families. Many of the effects described were worse than an operation." By several members it was out and out condemned. But I think the words with which Mr. W. Lyon concluded the discussion are sufficiently worthy of being quoted, if for no other reason than that they indicate the sound judgment which men of that period were capable of forming on subjects of doubt and difficulty. Thus, he is reported to have said "that he was not inclined to say that the use of chloroform should be abandoned. We had not yet sufficient experience of the remedy to abandon it. It might be that we would arrive at a better knowledge of its property and have it more completely in command."

I think, gentlemen, that apart from the substance of the remarks which I have just read, you must have been struck by the excellent way in which they have been reported; and I should like incidentally to introduce here a tribute of respect for and praise to Dr. James Maxwell Adams, the father of the present esteemed ex-President of the Royal Faculty, for the admirable manner in which the minutes of the Society were kept during his period of secretaryship from 1845 to 1851.

Not only were his own deeds good, but his careful and almost exhaustive records enable one to learn how worthy were the doings of his contemporaries.

There are some facts recorded in these early minutes which are of real historical interest, for we get an insight into phases of disease existing in those times which modern methods of treatment have so completely obliterated that, but for such revelations, we would know but little of them. As a very striking instance of this, there is a discussion recorded on the subject of gall-stones, based on a specimen exhibited by Mr. Lyon. The patient was a lady, aged forty-five years, who had suffered from gastrodynia for twenty years. "Nothing alleviated the intense pain ultimately felt but opium; but as this produced considerable constitutional disturbance it was laid aside for chloroform, nearly eight ounces of which were daily used for two months. The pain recurred daily, and was followed by rigors and sweating; jaundice and hiccough supervened." The patient for years lived a miserable life, and died a wretched death.

This case could have been no exception to what must have been the frequent sequel to the presence of gall-stones in those days; a picture of suffering which we never see, and happily are not likely ever to see again. It is not a little to the credit of Mr. Lyon, who, judging by his contributions at different times to the Society, must have been one of the ablest surgeons of his day, that he had the almost instinctive foresight to remark in his concluding observations on the case that, "though his suggestion might be considered Utopian, he ventured to ask whether the removal of stones by vivisection would not be practicable and proper."

It appears that the Society did not wholly restrict its transactions to what might be termed strictly clinical discussions, for sometimes it exerted itself in matters which concerned more the profession than the patient. Thus, there are such instances as these. "The Chairman mentioned that the co-operation of the Society had been invited by the meeting lately held in the city for the purpose of procuring parliamentary representation for Scottish graduates." At another meeting the following resolution was passed:—"That this Society pledges itself to co-operate with the profession generally in securing a thorough reform of the Navy Medical Department, and a due recognition



of the proper status of Assistant Surgeons." In somewhat lighter vein may be instanced a paper by Dr. J. B. Cowan, who subsequently became Professor of Materia Medica in the University. On 4th December, 1855, he "gave," as the minutes record, "an interesting account of his Crimean travels, describing at some length the site, construction, and extent of various hospitals." A paper of a somewhat similar geographical character was read before the Society on 2nd March, 1858, by Dr. George H. B. Macleod, the late Professor of Surgery in the University, on "The Mediterranean Sea, its coasts and islands: their medical topography and climate considered with reference to their adaptability for invalids." (May I venture to hope that these papers will establish sufficient precedent for similar contributions from some of our members who have, during the war, been on overseas service?)

There are two contributions by very distinguished members of the Society which are worthy of notice. One was by Dr. William Leishman, the late Professor of Midwifery in the University, who encountered much opposition when reading his paper before the Society on 20th December, 1859, on "Rupture of the Perineum." "After a review," the minute goes on to record, "of all that had been written on the subject from the very earliest date, the essayist announced as his opinion that any method of supporting the perineum during labour is injurious." The other contribution was by Dr. Allen Thomson, the late Professor of Anatomy at the University. On the 16th February, 1858, he introduced to the Society M. Groux, of Hamburg, "who was the subject of a remarkable congenital deficiency of the sternum, exhibiting in some measure the motions of the heart."

Considerable interest always attaches to opinions expressed on current topics when these can be compared with views held by men of outstanding position in years gone by; and I think you will be interested if I very briefly indicate the views held on the excessive Infant Mortality in cities and large towns. The mortality was attributed principally to the following special agencies placed in their order of importance:—

1. Overcrowding and vitiated air, imperfect drainage and deficient supply of light;
2. Deficient nutrition;



3. Want of hospitals for sick children ;
4. Too early marriages ; and
5. Neglect of illegitimate children.

I almost think that if our esteemed Medical Officer of Health were asked to tabulate a code of causes for present-day mortality among children, he would, even at this period of sixty years later, repeat the same list, so little do we seem to have advanced in the way of saving infant life.

But I am forgetting, gentlemen, that we are not gathered here this evening to discuss some of the serious problems of disease or the possible defects of municipal administration ; and I think you will begin to feel that I have dug sufficiently deep into and dwelt quite long enough upon the chronicles of our worthy predecessors. However, I cannot leave these interesting and frequently instructive old records of the Glasgow Medical Society, as it was called up to 1866, without just giving you the substance of one more discussion that took place on 4th December, 1860, a discussion which, you will possibly agree with me, is peculiarly suitable for the present time and occasion. The subject was "The Therapeutic Action of Tobacco," introduced by Dr. James Morton. As you can imagine, the discussion took a very wide view of the subject, regarding it both from a medical and moral aspect, with a very strong strain of personal experience infused into it. But I must give you a few of the opinions expressed as recorded in the minutes. Mr. John Reid observed that "we could not take too extensive a view of its demoralising effects. No young man who indulges in the excessive use of tobacco attains to any eminence. In students it produced inattention to the lectures and anxiety to get away to their pipe and pint." Dr. Lyon said, "Smoking was unnecessary, expensive, an abuse of time, and offensive to others. It was not a habit that ought to be indulged in by a person of sense or education ; and that no one would like to see his wife or daughter addicted to it in any form." Dr. Connel said, "I am a smoker myself and consider tobacco harmless in moderation, and I never experience any injurious effects from its use. Anti-tobacconists ought to be teetotalists."

Well, gentlemen, I shall not pursue the subject further ; evidently the doctors differed much then as they do now ; and

although the minutes record the opinions of several other members, I fancy the terse remarks of Dr. Lindsay will meet with most general acceptance that "a smoker should be allowed to enjoy his weed."

Now, I shall not detain you much longer, inasmuch as the period from 1866 onwards in the history of the Society would gradually bring me on to ground already familiar to many here to-night. The year 1866, to which I have just referred, indicates a date that saw a change both in the name and constitution of the Society. In 1844 there was formed a Society that called itself "The Medico-Chirurgical." This Society appears to have owed its inception to the fact that many members of the Glasgow Medical Society and other members of the profession objected to the strict rules under which membership of the original Society was granted. The fines were heavy, and the essays or papers were delivered under compulsion. As time went on, however, there was considerable relaxation of these restrictive regulations; and so the two Societies came to be almost identical in their aims and objects. Union, therefore, seemed the natural result; and hence it was agreed that the combination should be called by the name of the newer Society, but it should be considered a continuation of the older one. This newly re-organised Society met for the first time on 4th September, 1866, under the presidency of Professor Allen Thomson. Did time permit, and were this the proper occasion, it would not be difficult to show how well the past traditions of the Society over the first half century of its existence have been maintained in the last half century. To mention the names of only three distinguished contributors, Lord Lister, Lord Kelvin, and Sir William Gairdner, and there were several others, will sufficiently attest the high position the Society has held and still holds in the realm of medical science. May we not look hopefully forward to the future with increasing surety that a Society that can boast of such good work in the past, that has had among its members some of the most distinguished representatives of our profession, and has received the gracious recognition of His Majesty, King George, will maintain the high traditions it possesses and the worthy position it at present occupies.

At the conclusion of the President's speech, Dr. JOHN F. FERGUS read the following verses, written by him for the centenary celebration:—

THEN AND NOW.  
(1814—1914.)

WHEN our Society had birth  
And shed new lustre on the earth—  
At least upon our local soil  
The scene of good St. Mungo's toil—  
Things were much simpler then than now,  
And learning's great and mighty plough  
Had many furrows yet to till,  
Even as it must drive onward still ;  
So there was much they did not know  
Who lived a hundred years ago.

They did not know—or so I think—  
That they might have an ileal kink,  
While if they had internal pain  
They did not think at once of Lane ;  
Not the long lane that has no turning  
But him who for your colon's yearning.  
Or, gorging on the frequent joint,  
They recked not of M'Burney's point,  
Nor knew they of appendicitis  
Which of our modern day the blight is,  
And which 'twas then the common fashion  
To designate the Iliac Passion ;  
Although typhlitis was a word  
That now and then perchance occurred.  
Although they nimbly cut for stone  
Short circuiting was quite unknown,  
And Murphy's buttons—now discarded—  
Were not as heirlooms then regarded.  
Salvarsan then was not the rage,  
The gristly chancre to assuage,  
And make the secondaries yield ;  
For Mercury still held the field,  
And it was pushed at that old date  
To make their patients salivate.  
But complement and antigen  
Had not been even dreamt of then,  
And antibodies played no part  
In practice of the healing art,  
While of the blood all they could wot  
Was Liquor Sanguinis and clot.  
And we can ponder well their plight,  
Confronted with the leucocyte,

Of many a varied shape and size  
For which blood cranks new names devise.  
One wonders how on earth they'd feel  
If asked to spot a neutrophile,  
A mast cell, or a myelocyte,  
Bedecked in colours gay and bright ;  
While, if one mentioned normoblast,  
These gentlemen of times long past  
Might think it some new imprecation  
And shrink away in trepidation.

High pressures were not then the fashion  
Nor extra-systoles a passion,  
And hearts might "block " to their content,  
But then it mattered not a cent.  
They took the pulse to note its beat,  
And whether it was slow or fleet,  
But did not know the sphygmograph,  
At which the ultra moderns laugh ;  
For Polygraphs are now the rage  
With every cardiologic sage.  
They *may* have known that stings of bees  
Can give rheumatics grateful ease,  
But never guessed the nimble flea  
A carrier of plague can be,  
Or that the humble common louse  
Who in our garments finds his house,  
Can be a potent cause of fever,  
Or the mosquito be receiver  
Of stolen blood to carry ague ;  
While of bacilli that can plague you,  
And make you ill in various ways,  
They never dreamed in those old days,  
When still the humours and the vapours  
Furnished the theme of learned papers.  
The test meal then they did not know,  
For dredging from the depths below  
The tell-tale breakfasts or the dinners  
Of erring gastronomic sinners ;  
Nor were their colons then washed bare  
By rectal baths at Plombières,  
Nor did they—so it's understood—  
Test furiously for occult blood,

They did not analyse the faeces  
 And pound them into little pieces  
 To find their nitrogen content :—  
 They *gazed* upon the excrement.  
 Our X-ray work to them would seem  
 The wildest fancy of a dream,  
 And one may wonder how they'd feel  
 If set down to a Bismuth meal,  
 Which a poor substitute they'd think  
 For home-fed beef and home-brewed  
     drink,  
 Or even this "Banquet" which to-night  
 Is now reposing in our "Kyte."  
 And Radium then so strange and weird  
 To mortal eye had not appeared ;  
 And there was no electric light,  
 Nor was our friend the phagocyte  
 A present help in daily praxis ;  
 And none had heard of chemiotaxis,  
 While for such things as opsonins  
 They'd not have given a pair of pins ;  
 And as for vaccines and for sera  
 They'd have been thought a wild chimera.  
 The wagging weird trypanosome  
 No one had hunted to its home,  
 And none as yet had chanced to meet  
 Our twisty friend the spirochete.  
 Then anasthetics' soothing power  
 Had not become our common dower,  
 Nor did they golden guerdons reap  
 By recommending twilight sleep ;  
 Though with drugged wine they did their  
     best  
 To give the weary sufferer rest.  
*All* surgeons then were quick of hand,  
 As *some* are still I understand,  
 And their dexterity they prized  
 And amputated, and excised,  
 With such skilled speed that students sat  
 Agape with awe, yet glancing at  
 Their watches by whose aid they reckoned  
 The time to fractions of a second.  
 But bellies were not opened gaily  
 By surgeons by the hundred daily,

For when they tackled the omentum  
 Mortality was *cept. per centum*.  
 But yet withal they did their best  
 With the crude means that they possessed.  
 They'd great belief in pill and potion  
 In haustus, linctus and in lotion,  
 In lohoch, julep and in clyster,  
 In apozeme, in quilt, in blister,  
 In caudles, and in cataplasms,  
 Both sovereign remedies for spasms ;  
 In escharotics and in setons,  
 And other methods now effete 'uns.  
 Then, if their patient were not dead  
 To crown the lot they freely bled ;  
 They bled for ague, bled for gout,  
 They bled the thin, they bled the stout,  
 They bled for humours and for vapours  
 They bled for epileptics' capers,  
 They bled for fevers high or low,  
 They bled to make the menses flow,  
 They bled to stop a bleeding pile,  
 They bled for gravel and the bile,  
 They bled to clean a dirty tongue,  
 They bled for bleeding from the lung,  
 They bled the lusty, bled the weedy,  
 They bled the rich, they bled the needy,  
 They bled in winter, bled in spring,  
 In short—they bled for everything.

But then as now they played their part  
 In furthering our noble art ;  
 Humane and upright, skilled and true,  
 This aim was ever kept in view,  
 With dread disease stern war to wage  
 And suffering's anguish to assuage,  
 Fired by ambition high and pure  
 With God's great grace to aid their cure.

Then when they'd lived their useful day  
 And to the shades had passed away,  
 They handed on the Lamp of Truth  
 To light the steps of ardent youth,  
 And we their age-long heirs to-night,  
 Must hand it on undimmed and bright.

The toast of "The Guests" was proposed by Dr. W. R. JACK,  
 who said—

There are two toasts this evening of which it is difficult to  
 assess the relative importance. The first is that of our Society,



which has been so eloquently and informatively proposed, Mr. Chairman, by yourself, and has met with the acclamation which we all feel to be its due; and the second is that of our guests. In acclaiming the first of these toasts we have honoured not only ourselves, but our ancestors, whether lineal or scientific, and the spirit of continued life and vigour which they have handed down to us, and which we trust we may hand on to those who are to follow. In the toast which it is my high honour to have been asked to propose to you, we go beyond our immediate interests and relationships, and seek, however inadequately, to express our sense of the honour done to us by the presence with us of so many men distinguished in the highest degree in medicine and the cognate sciences and professions. None of us will dispute the importance of our own Society, but I claim for the toast with which I have been entrusted an even greater importance. In the act of inviting them to our table we place our guests before and above ourselves, and in their gracious acceptance of the small honour we have done them they have shed upon our Society a portion of the lustre that surrounds their names.

It would seem superfluous to say that both of the toasts to which I have referred must yield, not only in pride of place, but also in warmth of sentiment, to that of His Majesty the King, especially upon an occasion such as this, when we have received the signal mark of Royal favour which our Chairman intimated to us, were it not for a consideration that may, no doubt, have appealed to other speakers before myself. When the toast of the King is proposed at any public dinner the Chairman, as a rule, wastes no words upon it. "Gentlemen, the King," is the formula, and all is said. Why? Not because the toast is a mere formality, a permission to smoke and to begin the freer part of the evening; but because the King and what he stands for—the lives and liberties of Englishmen and Scotsmen, the feeling common to each of us that a portion of himself has *in excelsis* its representative in His Majesty, the wider sense that he is the symbol of the binding force that draws together the scattered units of our Empire—are so familiar to us as to be part of our daily life, and our act of homage is so natural as to require no elaborate explanation.

On that principle the most important toasts should have the

least said about them; and those who are known as our guests are known—some of them, perhaps, hitherto to some of us by reputation only, but now face to face—and honoured as they are honoured, should require no introduction from me. Our Chairman, I need not say, was abundantly justified in the words in which he introduced the toast of our Society. He dealt largely with matters of history—a study never more neglected than in revolutionary times, and never more necessary than then—and he had to paint for us, as he did so brilliantly and so well, not only the present which we know, but the past which we had, at least many of us, partially forgotten.

My justification would seem to be less obvious. Sir Thomas Dunlop, Sir Donald MacAlister, Sir Humphrey Rolleston, Sir Harold Stiles, Sheriff Mackenzie, Dr. George Mackay—as I go down the list of names which is in your hands, there is not one of them which is not for more than sufficient reasons familiar to almost all of us, and already held in such honour as no words of mine can add to. Were they here as individuals only you would acclaim each name as it was mentioned, and my task would be best accomplished if I read you the list, and asked you to signify your welcome in a bumper. Yet, I think, there is a reason why I should ask your attention for a couple of minutes. Our guests are here both, I trust, because it pleases them individually to be with us, and also because they come as representatives of scientific societies, institutions of learning, public bodies, and the forces moulding public opinion, which have united to do us honour in this our centenary celebration. If we reflect for a moment on the wideness of the response to our invitation, which is evidenced not only by those happily with us this evening, but by those also who are with us in sympathy if not in person—a response from London, Oxford, Cambridge, Edinburgh, St. Andrews, Lanarkshire, and our own city and University; and the response, if I may mention it last, because it came last and but a moment ago to our knowledge, but which for every other reason should be placed first, the response from the Royal House—we have, I think, matter for pride in the universal recognition of the historic status of our Society, and for aspiration, tempered, I hope, with something of humility, that we may be worthy to carry on the tradition of scientific enquiry handed down to us by

such men as Mackenzie, the two Thomsons, Lister, Macewen, and Gairdner. If we reflect further, that the response has come not only from members of the medical profession, but from representatives of the city, of the legal profession, of the press, and of public health, we may see in it, I think, the expression of a general desire, not only for collaboration and for more intimate relations between the societies representing medicine in the different portions of the Kingdom, but also for a genuine endeavour towards co-operation on the part of all the forces in our common country that make for health, for education, and for good government. If that is the case, as I trust and believe it is, our meeting of this evening has not only a commemorative value, but is of singularly happy omen in these troublous times.

The three names which it is my privilege to couple with this toast are those of Sir Humphrey Davy Rolleston, Professor Francis M. Caird, and Professor Bower.

Sir Humphrey Rolleston comes to us as a guest singularly valued not only for what he has done and for what he is, although these in themselves are sufficient claims to admit him as an honoured guest wherever he may set his foot, but for the welcome and greeting which he brings us from the Royal Society of Medicine. His *Clinical Lectures*, his monumental and immensely valuable work on *Diseases of the Liver*, his joint-editorship with Sir Clifford Allbutt of the famous *System of Medicine*, have made his name universally familiar. But he is a doubly welcome guest because, as President of the Royal Society of Medicine, he is able to assure us of the sympathetic and friendly interest which that distinguished body takes in the history and the progress of our Society.

Professor Francis Caird, long known to us all as the brilliant surgeon and the distinguished author of anatomical and surgical treatises which have lightened the path of thousands, is with us to-night as President of the sister Medico-Chirurgical Society of Edinburgh. However in the past the rivalry between the two cities may have on occasion strained the friendship which should exist between them, we rejoice to think that meetings such as this, where he and many others of our distinguished Edinburgh colleagues are one with us in feeling and in fellowship, portend a future in which the only rivalry

between the cities shall be that of friendly emulation in a common cause.

Of Professor Bower, on the principle I enunciated a few minutes ago, I should say but little. But he is the senior member of the Faculty of Medicine in our own University; he has been, I doubt not, the teacher of very many of us here—I regret that my own years deprived me of the privilege of sitting under him—and he is the friend, I am certain, of everybody who knows him. Of his distinction in science I need not speak to *you*, but as one of the representatives of that *Alma Mater* on whose occasionally somewhat sour but always wholesome milk we were nourished for so many years, as representative of those teachers upon whose influence we all affectionately look back, and as the friend and encourager of all his worthy pupils, I am sure that his name will receive from you no less royal a welcome than you will accord to those of Sir Humphrey Rolleston, Professor Francis Caird, and the rest of our distinguished guests.

Replying for “The Guests,” Sir HUMPHREY DAVY ROLLESTON, K.C.B., said:—

MR. CHAIRMAN AND GENTLEMEN,—First let me thank you most heartily for your generous hospitality, and, from the Medical Societies in London, for the cordial manner in which you have received the toast of “The Guests.” On behalf of the Royal Society of Medicine may I at once hand you our written message of goodwill, and ask you to accept it as if it were written in the most scholarly latinity:—

*To the President, Council and Members of the  
Medico-Chirurgical Society of Glasgow.*

The President, Council and Fellows of the  
Royal Society of Medicine, greeting.

We are happy to have been given an opportunity of offering our most sincere congratulations to a Sister Society on its centenary, and while we are sure that it will receive many cordial greetings on the occasion, we are convinced that none can be more sincere, more cordial or more sympathetic—in the fullest sense of the word—than ours, for there are few Medical Societies or organisations that have had a like experience,



Your activities have been well known and greatly valued by the medical profession throughout the world for the successful advance it has made in the study of scientific medicine, and we are happy in believing that, having proved the soundness of the foundations upon which your forefathers built, you will go on from strength to strength, and in firm faith that in 2014 our two Societies will be able to congratulate each other on two centuries of beneficent work.

We thank you for asking us to share in your celebration in the person of our President, Sir Humphrey Rolleston, who bears to you this greeting, and will personally express to you the warmth of our feelings on this occasion.

HUMPHREY ROLLESTON,	<i>President.</i>
HERBERT S. PENDLEBURY,	} <i>Hon. Treasurers.</i>
W. PASTEUR,	
WALTER G. SPENCER,	} <i>Hon. Librarians.</i>
RAYMOND CRAWFURD,	
C. H. FAGGE,	} <i>Hon. Secretaries.</i>
WM. H. GRAY,	
J. Y. W. MACALISTER,	<i>Secretary.</i>

*15th December, 1919.*

May I say that, at the same meeting yesterday at which this message was passed, the Society did itself the honour of electing as an Honorary Fellow, to represent British Surgery, Sir William Macewen, one of your past presidents. There are many resemblances, and not a few connections, between your Society and ours. We are both Royal Societies. We are both about the same age; you were founded in 1814, and we were in 1805. We had, as our first President, William Saunders of Banff, an M.D. of Edinburgh. With our second President, Matthew Baillie, nephew of the Hunters, you will agree that we did even better. Our fourth President, Sir Gilbert Blane of Blanefield, in Ayr, was an M.D. of Glasgow; at first he intended to go into the ministry, but, like William Hunter, his future teacher, he exchanged the care of souls for that of bodies, and this he did to some effect, for by insisting upon the adoption of the measure advocated for more than forty years by his countryman, James Lind, he banished scurvy from the Navy.

I will not weary you by going through all our presidents, though it must be confessed that Addison and Bright both

came to London from Edinburgh, and James Copland, perhaps the most voluminous of medical writers, hailed from Orkney. The last President, Sir Rickman Godlee, was a nephew of Lord Lister's. Lately, perhaps you think, we have fallen on evil days, for the present President can claim very little—about a sixteenth-part of himself—as Scottish: the situation is, however, most fortunately saved by our Secretary, Sir John MacAlister, brother of your Principal, who has for thirty-three years advanced the success of the Society. Although he is far removed from our first President—Saunders—in point of time, it is, I believe, correct to say that in their names they are both closely related to Alexander. Again, both our Societies have added to themselves other societies, and, by a curious coincidence, your amalgamation with the Pathological Society of Glasgow and the union of the old Royal Medico-Chirurgical Society of London with other medical societies in London to form the Royal Society of Medicine took place in the same year, 1907.

It is a curious fact that at the present time the Presidents of most of the other medical societies of London have names which suggest Scottish ancestry; the President of the Medical Society, Mr. Warren Low, has a familiar name to your Faculty of Physicians and Surgeons: Dr. Chambers of the West London Medico-Chirurgical Society succeeded Colonel Wilson, both of these names suggesting the glories of Edinburgh; Dr. James Taylor, President of the Harveian Society, is undoubtedly Scottish: and Dr. Langdon Brown of the Hunterian Society recalls pleasant memories of "Rab and his Friends." But it must strike you that, in attempting to show our common resemblances, I have really revealed our debt to you; for in the matter of give-and-take you have given, and London has taken, good men: and I am wondering what we can point to on the credit side; I think we can claim your Chairman, and if I could add your Principal, Sir Donald MacAlister, my own teacher at Cambridge, I should feel more content; but this I fear would be stretching a point, as he has only returned to the land of his fathers. In conclusion, let me express my deep appreciation of the graceful way in which Dr. Jack proposed the toast of "The Guests," and record my most sincere thanks on behalf of the London Societies.

Emeritus Professor FRANCIS M. CAIRD, F.R.C.S.Edin., President, Edinburgh Medico-Chirurgical Society, also replied for "The Guests," and said—

I feel very greatly the honour of occupying my present position, and still more of accepting the responsibility of responding for the guests. I can assure you that all your guests are at one in agreeing with the remarks which have just now fallen from the last speaker, that we all feel at home in Glasgow, and that we always get in Glasgow a welcome which fills our hearts with kindness and a constant desire to return. I would fain express to you, if I could, the sentiments which animate all the guests who are present, and I would attempt to do so because I feel that they are animated by precisely the same sentiments which animated me on the first occasion when I had an opportunity of introduction to your famous city. That was many years ago. I am sorry to say it is very ancient history. "I was a pale young student then." Yes, I was a pale young student then, who formed one of a very select, and very small, band which sought certain anatomical and surgical knowledge in your city which, unfortunately, the Metropolis of the East did not offer. Consequently, we turned our steps westward, and landing in Glasgow, what could we do, having youthful ideals and high aims, above all professional aims, what could we do but first of all turn our pious footsteps to the tomb—I might almost say the shrine—of Maister Peter Lowe? And at nights we could return illuminated by the teaching of a rising Western surgeon who at that time was about to make his name memorable by his contributions to the study of the central nervous system. It was not only filled with professional aims that we came to Glasgow; we had certain high ideals. Frequently we traversed your streets, thronged with busy men, centres of activity, and felt our hearts harmonise with the ringing clamour of hammers; felt that we were in the very heart of Scottish commercial prosperity. And, on the æsthetical side, was there not the Hunterian collection to investigate? And were the picture galleries not tempting us to enter and linger over the works of art? And did we not discern that a Scottish School of Art was in process of formation? And could we not well shout with anyone "Let Glasgow Flourish"? Glasgow has flourished by the teaching of the word, as we have been reminded to-night. By deed, by statement, by discussion, by proof, the truth is to

be elicited. I could say quite a lot about the happy associations I formed in Glasgow, but the time is late, and you are spared a great deal. One thing I cannot thoroughly or adequately express is the feeling of gratitude with which your guests have received the toast which has been proposed to-night. We would like to express to you most cordially our sense of the welcome which we have received. We would like to offer to you our congratulations on this occasion, and to say that we trust that the Society will have continuance and prosperity for many, many years to come. And will you permit me to associate with your guests the sister society in Edinburgh, the Edinburgh Medico-Chirurgical Society?

Professor F. O. BOWER, F.R.S., *P.R.S.E.*, Glasgow University, also, in acknowledgment of the toast of "The Guests," said—

On behalf of the Medical Faculty at the University, I have to thank you for your very cordial welcome. I have filled my present position for thirty-five years now, and I have reckoned it a very high privilege and a great pleasure to welcome the young student on his first arrival at the University. Very often it falls to me, and sometimes to Professor Graham Kerr, to bring the young students face to face for the first time with the living organism, and, in leading them to the study of the protoplasm and life, we try to instil into their minds at the very beginning a sense of, as far as we can, the indications of life, the stimulus and the response to the stimulus, and how it works out in organisms of the animal and the vegetable kingdoms. It is an extremely difficult thing to do, but it is some satisfaction to hear, as one sometimes does at the end of the course, that one has succeeded in altering a student's outlook upon these things. I should like to take an opportunity of saying a word or two upon a subject which is occupying a great deal of attention just now—the medical curriculum itself. The difficulty at present with the medical curriculum is that there is a plethora, a surfeit, of subjects, and, as you are aware, certain committees are considering the problem. There have been suggestions that the problem might be solved in various ways. I might perhaps illustrate by a reference to the statue in the Book of Daniel which is described as having a head of gold and feet of clay. Sometimes it has been said that those subjects which are at the base of medical curriculum are feet of clay. But if you breathe



warmth and enthusiasm upon clay it may turn to what we call brick, and brick is a very useful article. If by the enthusiasm of the students of Glasgow these feet of clay are hardened in the way I have described, we might find that formed a very useful base for the structure which we might put upon them. The difficulty is that the statue is growing to a great height. There are various ways in which that height might be reduced. One is by surgical treatment—cut off the feet. It has been suggested that some of the scientific subjects might be dropped. There is another way, by medical treatment. The desired object might be secured by suggestion. From the upper parts of the statue suggestion might spread throughout the whole body. The suggestion to which I have referred is that we should have a better mutual understanding among those who teach in the medical curriculum, that from the head of gold there should come a suggestion which we have hardly ever heard in my long experience, that those who teach in the later parts of the curriculum might have more communication with those who teach in the earlier parts. This might have the effect of checking the increase by making the curriculum more compact. I certainly hope that as a result of the discussions now being conducted, of which we hope to have the result in a deliverance soon, that we may have some such suggestion of greater intercommunication between those who are working in the later parts of the curriculum and those working in the earlier parts, and that that may help to check the growth and increasing length of the curriculum. One other suggestion which has been made is to put the feet of the statue down into the ground, to teach some of the subjects in the school period. There are two objections to that proposal. The first is that boys of 16 or 17 are not psychologically fit to receive such instruction. The other objection is that those subjects should be taught by those who have made the subjects and their teaching the profession of their whole lives.

Just before the proceedings terminated, at 11 P.M., Mr. ARCHIBALD YOUNG, General Secretary of the Society, called on the company to drink the health of "The President of the Royal Medico-Chirurgical Society of Glasgow, Mr. Maylard, our Chairman."

The toast was responded to with acclamation.

## Obituary.

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JOHN MATHIE. L.R.F.P.S. GLASG.,  
GLASGOW.

It must be rare for a doctor to reach the very great age of 90 years, especially when his professional life is spent in general practice in the East-End of a city like Glasgow. The late Dr. John Mathie was for over fifty years one of the busiest in our midst, though for a few years before his death on 14th January, 1920, he had definitely ceased to practise. He was an Ayrshire man, born in 1830, and up to 19 years of age engaged in farm work. He used to say that an early ambition was to wear a black coat. This ambition he attained, first, when he became a school-teacher, rising to headmastership of a small East-End school, and second, when in the late fifties he became a student of the old Anderson's College and qualified in the Faculty of Physicians and Surgeons in 1863. It says much for his perseverance and employment of spare time, and for the indulgence of the school authorities, that while working as schoolmaster he was able to attend classes and take his diploma. His whole medical life was spent in the Calton district of the city, where he became a well-known and trusted practitioner, the counsellor and friend as well as doctor of numberless people. At one period he was a Medical Officer to the old Barony Parochial Board. For many years he was an active member—probably the last survivor—of the “Wee Faculty,” a group of practitioners in the East-End who met occasionally and subscribed to and passed round amongst themselves various medical journals.

He took an active part in church work as an office-bearer and as a most successful conductor of Mission Bible classes, and the writer has vivid recollections of many discussions on Scripture textual difficulties and church government with the writer's father, himself a keen Free Churchman.

Dr. Mathie is survived by two daughters and a son, who is a very active and successful medical practitioner in the East-End of Glasgow.

J. P.

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FORBES BROWN, M.B., C.M.GLASG., L.R.C.P. & S.ED., L.R.F.P.S.GLASG.,  
GOVAN.

IT is with very great regret that we have learned of the passing at the comparatively early age of 55 of Dr. Forbes Brown, of Govan. On the night of 28th January Dr. Brown was resting at his own fireside shortly before retiring, apparently in his usual health, when death came to him with absolute suddenness.

Born and brought up in Govan, all his social and professional interests lay in this great populous district of Glasgow. A man of geniality and happiness of manner, he was extremely popular, and his loss will be felt as a personal one by fellow-practitioners and patients alike. He received the Triple Qualification Diploma in 1892, and a year later graduated in Glasgow University. Though pre-occupied with busy practice he took an active part in medical affairs as secretary of the Govan Medical Association, and as a member of the Glasgow Panel Committee.

Dr. Brown is survived by his wife and two daughters, one of whom is in the nursing profession.

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SIR WILLIAM OSLER, BART., M.D., F.R.S., F.R.C.P.

THE whole medical world is infinitely the poorer by the death of the Regius Professor of Medicine at Oxford, which occurred on 29th December last, somewhat suddenly and to some extent unexpectedly at the end, though he had been ill for some two months or more. It is difficult to think of Osler as an old man, so full of mental vigour and freshness of outlook was he to the very end, and yet he had passed the "three score and ten years," his seventieth birthday, on 12th July, 1919, having been made the occasion of a tribute of affection and

homage from a large number of representative members of the profession on both sides of the Atlantic, who presented him with a collection of essays, in two volumes, written by leading members of the profession. The presentation was made by Sir Clifford Allbutt, the felicity and gracefulness of whose speech in making the presentation was only equalled by the deep sincerity and wealth of feeling in Sir William Osler's reply, couched, as it was, in terms no less graceful than those of his brother Regius Professor of Cambridge. On that occasion there was no evidence of the "too old at forty" theorem, which, many years before, by the perverted ingenuity of an American reporter, had been attributed to Osler as his own serious opinion, though really a humorous reference to one of Anthony Trollope's novels, for, though the war had told heavily upon him, both in a full toll of hard work nobly done and by the loss of his only son in France in 1917, there was no falling off in the acuteness of his intellect, in the width of his outlook and his learning, nor in the human and lovable catholicity of his spirit, while the playful humour and nimble mother wit, which were so eminently characteristic of him, were as yet undimmed.

Osler's career, his attainments and his work, are so well known to the profession as to need no recapitulation here, for his personality so pervaded his work that by his death practically every English-speaking practitioner—whether he ever met the man in the flesh or not—has a sense of personal sorrow at the loss of one who was ever—even in his written works—an inspiring and stimulating teacher, a trusty and tried counsellor, and a mine of information which was founded on an almost unrivalled clinical experience, the treasures of which were collected and classified with a methodical and systematic thoroughness that formed almost a new departure in clinical procedure.

A hard worker himself, Osler inspired enthusiasm and the love of work in others, and both in America and in this country gathered round him a devoted band of younger colleagues and collaborators who were proud to work under such a chief, and whose work in special departments of medicine—always generously acknowledged by Osler—was utilised by their chief in the preparation of his text-books. Osler was one of the first to recognise the value of what is now termed "team work" in



medicine, and it was always a willing and capable team, with a master hand as its driver.

Though his book, *The Principles and Practice of Medicine*, is probably the most widely read text-book of medicine in the English-speaking world, Osler was first and foremost a clinician—one of the greatest that the world has seen—and it is only from the depths of a profound and practical clinical experience that such a book could have been written. Personality—vivid, alert, interested personality—breathes in its every page and illumines and clarifies every problem, while the enormous amount of information compressed into the comparatively small bulk of the volume shows how wide was the range of Osler's knowledge of the whole domain of medicine, and how judicial his mind in selecting essentials.

Osler's personality was even more fascinating than his works. He combined in a peculiar degree the methods, the erudition, and the elegant learning and love of books of the old world, with the alertness and practical sagacity of the new, while his charming humour, his shrewd yet tolerant outlook, and his broad and genuinely human catholicity of spirit made him one of the most lovable of men.

A lover of books, interested in good literature in all its branches, and especially in history as bearing on medicine, it was but natural that Osler should write gracefully and well on subjects outside the range of medicine, and gifted as he was both by nature and by training with a deeply—though withal kindly—philosophical outlook on life, it is not surprising that there should have fallen from his pen a series of delightful volumes of essays and collected addresses delivered on special occasions which are likely to become classics of medical literature, and by which his memory may be kept green when the onward march of science has rendered even his marvellous contributions to medicine more or less out of date. *Aequanimitas and other Addresses, Counsels and Ideals, The Alabama Student and other Biographical Essays*, with its biographies of John Keats the apothecary poet, Oliver Wendell Holmes, Sir Thomas Browne, &c., and *The Old Humanities and the New Science*, form charming reading for the general reader as well as for the medical man, and in some of them at least one can trace the influence of Sir Thomas Browne, whose *Religio*

*Medici* was the second book Osler ever bought, and was always the most prized in his library.

After a brilliant record of work in Canada and America, beginning at the age of 25 with the Professorship of Medicine at McGill University, Montreal, with subsequent Professorships in the University of Pennsylvania at Philadelphia, and at the Johns Hopkins University in Baltimore, Osler was appointed Regius Professor of Medicine at Oxford in 1905, and it is not going too far to say that he revolutionised the study of medicine there, and made what had been a more or less academic position into a living and breathing reality perfused with his own splendid enthusiasm and enriched by his matchless knowledge of clinical medicine and his wide experience of a variety of medical schools. He recognised the need of bringing the academic teaching of medicine there more fully into touch with the realities of medical practice, and no one could have been better qualified to work the change than Osler, for, in addition to his unrivalled knowledge of clinical medicine and its teaching, his scholarly instincts and his humanistic sympathies made him a welcome addition to the teaching staff of the great English University in whose cultured atmosphere he found thenceforth a congenial home.

Honours, too numerous to mention, were showered on Osler, and he was an honorary graduate of all the principal Universities of the United Kingdom and America, while his baronetcy at the time of the accession of King George V was but a fitting acknowledgment of the distinguished position he held in the world of medicine; but withal he remained <sup>3</sup>/<sub>4</sub>totally unspoiled, a man of charming approachableness, free from guile or any suspicion of self-seeking, of the highest ideals, of broad and tender human sympathies, and of a delightful geniality and quaint humourousness.

While Osler leaves behind him a reputation that will not readily perish as a great teacher of medicine, he also leaves a no less noble reputation as a great man in the truest and best sense of the term.

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## SIR THOMAS R. FRASER, M.D., LL.D., F.R.S.

BY the death of the distinguished Emeritus Professor of *Materia Medica* in the University of Edinburgh, Scottish scientific medicine has sustained a severe loss. Both as an experimental pharmacologist and as a successful and stimulating teacher, Sir Thomas deservedly attained a high reputation which extended far beyond his own University and, indeed, beyond his own country, for his repute as a scientific investigator into the actions of drugs was world-wide. He was, indeed, one of the pillars of the Edinburgh School of Medicine, and in his own subject occupied a position not approached by any other teacher in Scotland, if, indeed, in the United Kingdom.

Born as long ago as 1841, he early gave promise of a distinguished career, graduating M.D. at Edinburgh University in 1862, when he gained a gold medal for his thesis, the subject of which, "*Physostigma*, or Calabar Bean and its Physiological Action," showed the direction in which the young graduate's thoughts were then turning for his life's work.

He found an admirable training for that work by acting as assistant to Sir Robert Christison, the then Professor of *Materia Medica*, whose name was a household one in Scotland, and in 1877 Fraser succeeded Christison in the Chair, which he then adorned for over forty years, only retiring in 1918.

His researches and writings on *strophanthus* are well known, and it is owing to them that *strophanthus* occupies the place it now does as a cardiac remedy. But it was probably his work on venenes and antivenenes in connection with snake-bite that most appealed to the popular fancy, the public—as usual expecting too much—hoping that in antivenenes a panacea would be found for what is a serious cause of mortality in the tropical and sub-tropical parts of the British Empire. Valuable, and in some directions successful as the work was, the great variety of lethal snakes with the greatly varying qualities of their venoms made it impossible to prepare what one may term a poly-antivenene which should be efficacious in all kinds of snake-bite, but there can be no question that the work of Fraser and Calmette has been of practical value.

Sir Thomas was a man deservedly held in high esteem, and honours flowed in on him. He was an LL.D. of three of the Scottish Universities, an Hon. Sc.D. of Cambridge, and a Fellow of the Royal Societies both of London and Edinburgh, while he did good work for the profession as a member of the General Medical Council for the ten years from 1905 to 1915, and served his own University as a Member of its Court from 1903 to 1914.

In 1893 he acted as President of the Government Commission on Plague in India, and in 1902 he received the honour of knighthood and was appointed one of His Majesty's Honorary Physicians in Scotland.

Though he had retired from his Chair, Sir Thomas had not outlived his reputation as an accomplished physician and an expert and original investigator, while his wide culture and geniality made him a much esteemed figure in Edinburgh society, where, as well as in scholastic circles, his death will be deplored and his personality much missed.

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## REVIEWS.

*Practical Obstetrics.* By E. HASTINGS TWEEDY, F.R.C.P.I., and G. T. WRENCH, M.D. Fourth Edition. London: Henry Frowde and Hodder & Stoughton. 1919. (21s. net.)

THIS book has now reached its fourth edition. Dr. Tweedy, who has revised this edition, has been associated in the work of the Rotunda Hospital during the absence of the Master on war work, and he has renewed his acquaintance with the clinical teaching of the Institution, teaching which is embodied in this book. The author claims the right to be dogmatic, and he certainly is. An author who has the right to do this from his great practical experience is infinitely to be preferred to one who has merely compiled a book from the experiences of many. We are in cordial agreement with many of his statements, but not with all. For instance, we do not believe that accidental hæmorrhage is nearly always toxæmic in origin; neither do we agree with him as to the advisability of rupturing the membranes in concealed hæmorrhage. In the dealing with occipito-posterior cases he objects to manual rotation of the head and shoulders. This is generally a simple procedure, and the subsequent delivery with forceps is much simplified. In face cases he makes no mention of converting the mento-posterior ones into vertex cases by manual flexion of the head. Schatz's method, which he describes, is useless in mento-posterior cases, and mento-anterior cases where it may be used are generally best left to nature. He is a strong advocate of leaving things to nature, and interfering as little as possible, but this can be overdone. For instance, in a face presentation there is no justification in waiting until signs of distress arise and there is tonic contraction of the uterus with impending rupture. We believe in interference in mento-posterior cases by flexion of the head as soon as the os is fully dilated. It is safer for the child, and saves the mother from hours of suffering.

At the end of the book there is an appendix with some

interesting statistics, and also two papers on eclampsia and one on the lower uterine segment.

The book is a very valuable one, and we have much pleasure in recommending it.

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*Traitement de Psychonévroses de Guerre.* Par G. ROUSSY, J. BOISSEAU, M. D'OELSnitz. Collection Horizon: Précis de Médecine et de Chirurgie de Guerre. Paris: Masson et Cie. 1918. (4 frs.)

THIS volume is in a sense a sequel to that by Roussy and Lhermitte, in the same series, entitled *Psychonévroses de Guerre*, but it is also a *résumé* of the former work, of which the conclusions are now modified, now confirmed, on the basis of a more extended field of observation. The greater part of it is given to treatment, but it opens with a clinical summary, and goes on to the discussion of etiology and prophylaxis. This is followed by an elaborate and clear statement of the various methods of treatment, psychotherapeutic and other, which leads to an investigation of the nature of certain war neuroses in the light of therapeutic results. This includes a long discussion of Babinski's theory of "reflex contracture" incurable by psychotherapy, a theory which the authors consider untenable, and to which they prefer the view that such "reflex" palsies form a syndrome indicative of prolonged immobilisation or faulty use of a limb. A chapter on prognosis concludes a volume which for breadth of view, for range of experience, and for abundance of practical detail could not easily be rivalled in so brief a compass. It should be in the library of every neurologist and military medical officer.

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*Nouvelle Méthode de Vaccination Antityphoïdique. Le Lipovaccin, T.A.B.* Par E. LE MOIGNIC et A. SEZARY. Paris: Librairie J. B. Baillière et fils. 1918. (2 fr.)

THE authors of this little volume, after discussing the principles of vaccine treatment, point out the disadvantages of aqueous

vaccines. Of these the chief are their toxicity, which compels the use of repeated small injections; the *gradual* production of immunity as a consequence of this protracted treatment; and the sometimes severe reactions which may follow the use even of restricted doses. For such aqueous vaccines they have substituted a suspension of typhoid and paratyphoid bacilli (2 mgrm. typhoid, 1.75 mgrm. each paratyphoid A. and B. per ccm.) in an oily medium. Of this a single injection of 1 cc. is sufficient to immunise against typhoid and paratyphoid fevers. Its toxicity is much lower than that of aqueous vaccines, the antigen being more slowly absorbed, and its efficacy has been abundantly demonstrated, not only by animal experiment, but on bodies of troops exposed to epidemics of enteric fever. Details of the method of preparation and of the technique of vaccination follow, and the book ends with a study of the reactions produced. Local reaction is slight, and in the great majority of cases there is no general reaction or merely a mild febrile disturbance, with, in a few instances, slight toxic phenomena. The method would seem to have already proved itself, and it is obviously capable of extension to many other infections. The authors, should its value be substantiated by other workers, will have rendered material service in the prophylaxis of the infections.

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*A Manual of Physical Diagnosis.* By AUSTIN FLINT, M.D.  
Seventh Edition. Revised by HENRY C. THACKER, M.S.,  
M.D. Philadelphia and New York: Lea and Febiger. 1917.  
(\$2.50.)

VERY well known in America, where its merits have caused a demand for edition after edition, Austin Flint's *Manual of Physical Diagnosis* is not as widely known in this country as it deserves. As its name implies, it does not discuss any of the accessory methods of diagnosis which the laboratory has brought to the aid of clinical medicine, but deals solely with the fundamental means of investigation of the patient by eye, ear, and fingers. The greater part of the book is given to percussion and auscultation. It opens with a discussion of their

physical basis, and of the anatomical, physiological, and pathological principles involved in their practice; it proceeds to a detailed description of the phenomena observed by them in health and disease: and it then applies what has been learnt to the physical diagnosis of diseases of the respiratory organs and heart. A brief chapter on examination of the abdomen, so brief that it might have been omitted without substantial detriment, concludes the volume. The most conspicuous merit of Professor Flint's work is that it combines lucidity and thoroughness, and that it insists throughout on the essential importance of methods of examination which it is the tendency of the modern student to regard as accessory to laboratory investigations and to radiography. It cannot fail to be of great service to those who make themselves masters of its contents.

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*Amputation Stumps: Their Care and After-Treatment.* By G. MARTIN HUGGINS, F.R.C.S., Medical Officer to the Government Schools, Salisbury, Rhodesia. London: Henry Frowde and Hodder & Stoughton. 1918. (7s. 6d. net.)

THERE is at the present day a large number of surgeons engaged in the treatment of cases in which amputation has been performed, and this small book has been written for their information. The author held the post of Surgical Specialist to the Pavilion Military Hospital in Brighton, and had exceptional opportunities there of seeing and treating large numbers of amputation cases. This experience was supplemented by regular visits to Rockhampton House, where he saw his own and other surgeons' cases fitted with artificial limbs.

We have read the book carefully, and find that the results of Mr. Huggins' observations are very clearly set forth. It is impossible for us to go into detail; but we may indicate that the whole subject is passed under review in a thoroughly practical fashion, and the book abounds with useful directions and hints as to the best sites for division of the various bones, the method of "bearing" appropriate to individual stumps, septic complications such as sinus and necrosis, and the different kinds of artificial limbs which have been found to be of most practical use.



The text is freely illustrated by reproductions of photographs, skiagrams, and drawings.

The book is an admirable one, and should be in the hands of all surgeons. It is furnished with a full index, which renders easy a reference to its contents. It is one of the best of the "Oxford War Primers," and we do not know what higher praise we could bestow.

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*The Treatment of Joint and Muscle Injuries.* By W. ROWLEY BRISTOW, M.B., B.S.Lond., F.R.C.S. London: Henry Frowde and Hodder & Stoughton. 1917. (6s. net.)

THOSE who are familiar with Mr. Bristow's reputation as a practitioner of electro-therapeutics will welcome an opportunity of possessing his teachings in printed form. In his new book he treats of medical electricity, massage, exercises, and therapeutic heat. The work is necessarily technical; but the author's clear and orderly exposition of his subject-matter places it at once within the grasp of the average medical man. Students who are seeking diplomas in massage and electricity may confidently accept *The Treatment of Joint and Muscle Injuries* as a textbook of great value for their purpose.

Perhaps the most important section of Mr. Bristow's book is that which deals with the technique of graduated contraction. Those who have studied only the older works on electricity will appreciate the decided change from the empirical to the scientific basis on which the subject is coming to be founded.

The remainder of the book is taken up with the treatment of particular conditions.

We have pleasure in recommending Mr. Bristow's volume.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

EDITED BY GEORGE MACINTYRE.

### DISEASES OF THE EYE.

**A Group of False Hemeralopia: The Nocturnal One-Eyed.**  
By L. Bussy, Lyon (*Arch. d'Ophtal.*, March-April, 1919).—The author brings together a group of cases in which, owing to defect in one eye in the dark, the patients became one-eyed, and lost binocular vision in the dark.

The first case was that of a chauffeur who had driven a taxi prior to the war, during which time he had never been troubled by darkness. Lately he had difficulty in driving it at night, and had caused two accidents within a few days of each other. There was considerable pupillary inequality—in the right eye myosis; and in the left, mydriasis. Argyll-Robertson reflex. The author states that the patient was not tabetic, but it seems probable that there was an early stage of atrophy of the optic nerve in the right eye.

The vision in both eyes was normal. When the room was darkened, the patient could easily distinguish the objects around him with the left eye, but he could only see them very faintly with the right. When both eyes were open, he could enumerate the instruments in the consulting room, but had great difficulty in making his way among the chairs.

There was no vertigo, but to find the exact place he had to feel for it, showing a difference from a tabetic. He behaved in the night exactly like a one-eyed person.

The second case had disseminated choroiditis in the right eye, while the left was normal. In a darkened room he was unable to distinguish anything with his right eye except the light from the lamp. When both eyes were open he was asked to move a chair, and he tried to catch it twice or thrice before he succeeded, showing the loss of binocular vision.

Case three came from the artillery, and had been sent by his captain because he was very clumsy in the dark. The right eye had -1, while the left had -6 of myopia. He had worn glasses for ten years, and had been a clerk before the war, and had not then these troubles. The vision of the right eye was normal in the dark, while everything appeared dimmer to the left eye. When both eyes were open he stumbled about the room, and was unable to put the lenses in their correct places in the box in a feeble light when he could do it without hesitation in full daylight.

The fourth case was also a motor driver, who knocked in the panel of the van which preceded his car. In one eye he had numerous adhesions from old iritis, the vision of this eye being good during the day but weakened in the dark.

The author points out that when a man becomes one-eyed, it takes him some months before he recovers his sense of depth and of locating objects in space. The bandaging of one eye for an ulcer on the cornea may make a patient awkward and hesitating, so that he misses the first step of the staircase, the curb of the pavement, and may dip his pen past the ink pot.

The false hemeralopes may be compared with these individuals. Each evening they become one-eyed. The first and the fourth cases the author considers to be one-eyed owing to the diminished amount of light entering the pupil, while in the second and third cases the loss of vision is due to diminished vitality in the retina and choroid.

When these cases are examined in the dark, their behaviour is different from the true hemeralope. They can see while the latter cannot, but they have no sense of relief. The true hemeralopes cannot see the shell-holes on the road, the gaps of the gratings of the hatches, the low branches obstructing the road, but the false hemeralope sees these things but cannot tell their position in relation to himself.

These false hemeralopes have only an intermittent unilateral blindness, because their binocular vision is normal during the day. They have, therefore, no time to educate themselves, as it can only be done in the dark, and the condition may persist indefinitely.

Bussy found 7 among 76 cases of hemeralopia referred to him during the war.

—W. B. INGLIS POLLOCK.

**The Examination by complete exposure of the Superior Cul-de-sac of the Conjunctiva.** By A. Terson (*Arch. d'Ophthal.*, January-February, 1919).—Terson points out that the general method of examining the superior fornix of the conjunctiva fails to give room for the complete removal of foreign bodies such as flies, grains of powder, particles of glass, and pieces of stone and plaster. He indicates several methods of making the examination, but describes the one he has employed for the last twenty years. He gives a subcutaneous injection of cocaine or allocaine. After ten minutes he seizes the superior eyelid with pressure forceps, and exposes the superior cul-de-sac by rolling the eyelid over the forceps, following the procedure for expression of trachoma granulations of Manolescu, Abadie, and Darier. This method allows a complete inspection, and it aids in the diagnosis and treatment of unrecognised foreign bodies, vegetations, granulations, tumours and simulated conjunctivitis. The method shows that follicles are often found in the superior cul-de-sac, which are more like adenoids, and are, of course, in a much less degree than those of trachoma. The method may aid at times the diaphanoscopy of the eye.

—W. B. INGLIS POLLOCK.

*Books, Pamphlets, &c., Received.*

- Handbook of Skin Diseases, by Frederick Gardiner, M.D., B.Sc. (Public Health), F.R.C.S.E. Edinburgh: E. & S. Livingstone. 1919. (6s. net.)
- Handbook of Anæsthetics, by J. Stuart Ross, M.B., Ch.B., F.R.C.S.E. With an introduction by Hy. Alexis Thomson, C.M.G., M.D., F.R.C.S.E., and Chapters upon Local and Spinal Anæsthesia, by Wm. Quarry Wood, M.D., F.R.C.S.E., and upon Intratracheal Anæsthesia, by H. Torrance Thomson, M.D., F.R.C.S.E. Edinburgh: E. & S. Livingstone. 1919. (7s. 6d. net.)
- Fractures, Compound Fractures, Dislocations, and their Treatment, with a Section on Amputations and Artificial Limbs, by John A. C. Macewen, M.B., C.M., B.Sc. Glasgow: MacLehose, Jackson & Co. 1919. (12s. 6d. net.)
- Aids to the Mathematics of Hygiene, by R. Bruce Ferguson, M.A., M.D., B.C.Cantab., D.P.H.Eng. Fifth edition. London: Baillière, Tindall & Cox. 1919. (3s. 6d. net.)
- Half a Century of Small-pox and Vaccination, being the Milroy Lectures delivered before the Royal College of Physicians of London on March 13th, 18th, and 20th, 1919, by John C. McVail, M.D., LL.D. Edinburgh; E. & S. Livingstone. (5s. 6d. net.)
- Child Welfare and the Teachings of Certain Dentists, School Medical Officers, Medical Officers of Health and other Medical Men, by J. Sim Wallace, D.Sc., M.D., L.D.S. London: Baillière, Tindall & Cox. 1919. (5s. net.)
- The Feeding of Nations: A Study in Applied Physiology, by Ernest H. Starling, C.M.G., M.D., F.R.C.P., F.R.S. The Oliver-Sharpey Lectures given at the Royal College of Physicians, London, June 3 and 5, 1919. London: Longmans, Green & Co. 1919. (5s. net.)
- The Physiology of Muscular Exercise, by F. A. Bainbridge, M.A., M.D.Cantab., D.Sc., F.R.C.P., F.R.S. With 22 diagrams. London: Longmans, Green & Co. 1919. (10s. 6d. net.)
- Electrical Treatment, by Wilfred Harris, M.D., F.R.C.P. Illustrated. Third edition. London: Cassell & Co., Limited. 1919. (9s. net.)
- Physiological Principles in Treatment, by W. Langdon Brown, M.A., M.D. Cantab., F.R.C.P. Fourth edition. London: Baillière, Tindall & Cox. 1919. (7s. 6d. net.)
- Swanzy's Handbook of the Diseases of the Eye and their Treatment. Twelfth edition. Edited by Louis Werner, M.B., F.R.C.S.I. Sen. Mod. Univ. Dubl. With illustrations. London: H. K. Lewis & Co., Limited. 1919. (22s. 6d. net.)
- Diseases of the Nose and Throat, by Herbert Tilley, B.Sc.Lond., F.R.C.S.Eng. With 74 plates and numerous text illustrations. Fourth edition. London: H. K. Lewis & Co., Limited. 1919. (25s. net.)
- The Nature of Enzyme Action, by W. M. Bayliss, M.A., D.Sc., F.R.S. Fourth edition. London: Longmans, Green & Co. 1919. (7s. 6d. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDED 24TH JANUARY, 1920.**

	WEEK ENDING				
	Dec. 27.	Jan. 3.	Jan. 10.	Jan. 17.	Jan. 24.
Mean temperature, . . .	36·7°	35·9°	37·0°	42·1°	41·1°
Amount of rainfall, . ins.	1·32	1·51	1·02	1·17	1·60
Deaths (corrected), . . .	316	328	402	371	356
Death-rates, . . . . .	14·7	15·3	18·8	17·4	16·7
Zymotic death-rates, . . .	0·3	0·8	0·6	0·5	0·4
Pulmonary death-rates, . .	4·3	4·4	5·8	5·0	4·5
DEATHS—					
Under 1 year, . . . . .	62	67	75	58	70
60 years and upwards, . .	96	93	142	129	126
DEATHS FROM—					
Small-pox, . . . . .	...	...	...	...	...
Measles, . . . . .	3	2	9	2	4
Scarlet fever, . . . . .	1	1	...	1	...
Diphtheria, . . . . .	3	8	4	4	3
Whooping-cough, . . . . .	...	5	...	2	1
Enteric fever, . . . . .	...	...	...	1	1
Cerebro-spinal fever, . . .	1	2	...	4	1
Diarrhoea (under 2 years of age),	3	7	3	3	6
Bronchitis, pneumonia, and pleurisy, . . . . .	77	77	112	98	79
CASES REPORTED—					
Small-pox, . . . . .	...	...	...	...	...
Cerebro-spinal meningitis, .	4	2	4	...	3
Diphtheria and membranous croup, . . . . .	35	32	89	53	58
Erysipelas, . . . . .	27	18	44	31	34
Scarlet fever, . . . . .	60	48	99	90	99
Typhus fever, . . . . .	...	...	...	...	...
Enteric fever, . . . . .	...	2	5	6	2
Phthisis, . . . . .	32	20	34	49	37
Puerperal fever, . . . . .	3	4	8	8	14
Measles,* . . . . .	122	35	180	258	244
Ophthalmia neonatorum, . .	13	13	23	27	11

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

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No. III. MARCH, 1920.

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ORIGINAL ARTICLES.

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THE PRACTICAL SIGNIFICANCE OF ATTENTION TO  
DETAIL IN ABDOMINAL OPERATIONS.\*

By A. ERNEST MAYLARD, B.S., F.R.S.E., F.R.F.P.S. GLASC.  
President of the Royal Medico-Chirurgical Society of Glasgow.

FOR the surgeon to single out any particular part of the body as deserving of more attention to detail than another would obviously, from one point of view, be a gross mistaking of his duties as an operator. For attention to detail should be as assiduously carried out in operating upon one part of the body as upon any other part. But it may quite reasonably be asserted that lack of attention to certain details may be fraught with much graver results, either immediate or remote, where this attention has been disregarded in some particular class of cases. For instance, to make my meaning quite clear, the slipping of a badly applied ligature off the uterine artery after hysterectomy would be a much more serious matter than

\* Read before the Society on Friday, 7th November, 1919.

a similar accident to the radial artery after amputation of the forearm. Apart from such contrast of similarities, however, there are in certain regions of the body details entirely peculiar to those regions; and specially so is this the case in operations upon the abdominal viscera. But, before dealing, as I intend to do, with the abdominal sphere of our work as operating surgeons, let me say that it is not in text books and but rarely in special monographs that we find these surgical minutiae, as they might be termed, described; rather are they only to be found and observed in the practical work of individual surgeons. Such details as I am venturing to ventilate might be considered by not a few, and those among the younger members of our profession, as too trivial to be worthy of regard; or, that to give them consideration and expression, would add undue and unnecessary length to the description of any particular operation. But, let me ask, is it right to consider anything too trivial, however small the detail may be, when compared with the major end in view, if the execution of that detail may lessen the possibility of subsequent complications, hasten the process of repair, and diminish the occurrence of pain. If, however, justification were needed, much less an excuse, and less even than that—an apology, for introducing such a subject—it is to be found in the extraordinary scrupulous regard for attention to detail which was shown by that greatest of all British surgeons, the late Lord Lister. No man could read the two volumes of "The Collected Papers of Joseph Baron Lister" without being profoundly impressed with the fact that it was his most minute and exact regard for small things—only small in a relative sense—that rendered his results so great and so perfect. Although the actual teaching of Lister, so far as it concerns strictly treatment, may be superseded and probably surpassed by other and improved measures, the methods that he employed to arrive at his own conclusions, his close reasoning and searching investigations, will ever remain as types and examples as well as sources of inspiration for all surgeons of future generations. They are profoundly instructive because based on the soundest scientific principles. There may be, perhaps I should more correctly say there will be, those who will take exception to a particular practice advocated. Where any such practice is based merely on theoretical considerations

it must naturally be left an open question, where there is a choice of two or more courses to pursue, which would be the best to adopt. Experience, after all, is the best test that can be applied, for it means judgment by results; and if we find that the adoption of any particular method is likely to avoid certain possible disadvantages which seem to us as probable of occurrence if such method is not executed, then we ought to give it every due consideration and attention. Let me now revert to what I have already indicated is to prove the basis of my few remarks—the consideration of details in connection with abdominal operations. These details may be advantageously considered under three heads. First, those connected with the abdominal parietes; second, those associated with the parietal and visceral peritoneum; and third, those dealing with the viscera. And here, let me say, I only intend to deal with such details as appear to me to be most frequently overlooked, if not, in some instances, regarded as of needless importance. I take for granted such common and well understood preventive measures as the pre-operative preparation of the patient, the efficient sterilisation of the skin, instruments, dressings, &c., protective measures as they apply to the operator, the operating room or theatre, and the assistants and nurses. These are various precautions which it is only natural to expect would be practised by every surgeon who ventures to enter such an important and susceptible region as the peritoneal cavity.

Considering, then, first of all

### THE PARIETAL INCISION.

While making our incision so as to deal adequately with the viscus we are seeking to treat, we want, so far as the incision itself is directly concerned, that it will heal by primary union and leave an absolutely secure and non-giving cicatrix; in short, we want to avoid anything of the nature of a post-operative ventral hernia. With this object in view the following details should be attended to:—

First, the incision, if possible, should be carried through that part of the abdomen where there is aponeurotic tissue. It is the efficient healing of the aponeurosis that is the surest preventive against subsequent hernia. The simple division of



pure muscle is of no moment if it has either in front or behind it an aponeurotic layer that can be properly united. On the other hand, where muscle is not so related, a hernia is almost certain subsequently to develop. Thus, then, it follows that the lumbar regions should as much as possible be avoided because the parietes there are all muscle and no aponeurosis.

Second, as few cuts as possible by the knife should be made in entering the abdominal cavity. The more "dissection" is carried out the greater the time employed, and the greater the destruction of tissue. It is of interest to analyse the conditions which these two considerations open up. Good blood-supply to the edges of a wound is one of the necessities of a good cicatrix, for it implies rapid and healthy organisation of the plastic material which cements together the margins of the wound. Now, the longer the wound is exposed, the more general and more extensive becomes the thrombosis of all the vessels which have been divided. It is, therefore, on these grounds, a mistaken practice to spend time over attempting to secure every minute bleeding point; to render a wound "dry" before proceeding to open the peritoneal cavity. It must be clearly understood that these remarks have no further application than to the region immediately under discussion; for where it is possible for oozing to take place into a cavity, after the occlusion of the wound, a "dry" condition of the surfaces may be a perfectly proper state to aim at acquiring. To "dissect" an incision, or, in other words, to make several cuts, is practically to lacerate the tissues; so that, in addition to the time which dissection necessarily entails, it exposes devitalised tissue to the danger of autogenous infection. It has been amply proved by careful bacteriological investigation that, however diligently we may strive to sterilise the skin, the deeper layers of the dermis and the subcutaneous tissues still may contain microbes. Equally has it been proved also that the blood may be similarly contaminated. And if, perchance, these microbes happen to be of a pyogenic or other pathogenic nature, it is easy to understand how any devitalised tissue would readily become a fruitful nidus for the development and extension of a septic process. When we remember how so small an injury as that effected by the prick or scratch of a septic pin or needle can cause extensive local and general disturbance, it will be well understood how

greatly increased is the risk of infection when the possibility of autogenetic inoculation exists in a wound that contains abundance of a rich cultivating medium.

As a practical illustration of the type of incisions I am now advocating, the so-called "gridiron" in either iliac region may be instanced. Here the first cut should be through the skin and subcutaneous tissue; the second through the aponeurosis of the external oblique muscle; the third through the internal oblique and transverse muscles; and the fourth through the sub-peritoneal fat and peritoneum; that is to say, four clean cuts should be sufficient to enter the abdomen. When the peritoneal cavity is approached through a part of the anterior parietes by a vertical or longitudinal incision, three and sometimes two cuts may be sufficient.

What has been said about the possible risks run in making our wound will with equal force apply to its closure, for it is quite possible to create conditions that may be just as favourable for the development and extension of sepsis as those engendered by the original incisions. The more perfect the coaptation of the wound margins, the less likelihood is there of any of those dangers here referred to; and this perfection depends principally upon the careful execution of two factors. One is, that no spaces be left which could contain practically inert material suitable for the lodgment and growth of micro-organisms. This accurate coaptation is dependent upon the amount of adipose tissue present. Where, for instance, there are two inches of fat between the skin and the muscle or aponeurosis it is almost impossible, even with deeply inserted mattress sutures, to bring the edges of the wound so closely and evenly together that no spaces are left for the accumulation of blood, serum, or liquid fat. When, therefore, there is reason to believe that the deep part of a very fat wound cannot be effectually coapted, it is wise to introduce along the floor of the wound a small rubber drainage tube, whose ends should protrude at the extremities of the incision, and whose withdrawal should be effected as soon as it appears to have sufficiently served its purpose. The other factor to be carefully attended to is the avoidance of too tight stitching, and the strangulation of the tissues between the sutures. It is hardly necessary to indicate how each of these two evils causes necrosis of tissue, and how such devitalised

tissue favours microbic development. In order to avoid strangulation of the wound margins in the application of mattress sutures, which are the most likely to offend in this particular, I have devised a special plan, which will be found figured in my book, *Practice and Problem in Abdominal Surgery*. I fear that a mere description of it, without an illustration, would fail to convey a sufficient working indication of how to apply the stitch. I must, therefore, ask those sufficiently desirous of practising the method to refer to those illustrations, the sight of which will at once indicate the way of execution. Tight stitching is much more likely to take place in the application of interrupted than continuous sutures, and, in the former, when the knot is a "reef" and not a "surgical" one. The particular kind of knot employed in suturing the skin affects, not a little, the subsequent comfort of a patient. A "reef" is much less likely to be irritative than a "granny," because the ends of a stiff material like silk-worm gut will lie flat on the skin in the former, while they are apt to project forwards into the dressing in the latter, so that any movement of the affected part has an irritative influence upon the wound. This may seem a very trivial detail to refer to, but no detail should be regarded lightly that affects in the smallest degree the post-operative comforts of our patient. And this particular consideration leads me, on similar ground, to refer to another method of closing a wound, which finds favour in the practice of some surgeons. I allude to the so-called "anchor" dressing. From a strictly surgical point of view it has much to commend it. The passage of a few sutures deeply through the wound margins, and then tying them over a roll of antiseptic gauze, tends not only to coapt the edges of the incision, but to lessen the possibility of capillary hæmorrhage, and so the accumulation of blood and serum in the wound. But opposed to this advantage is the particularly discomforting effect which any movement has upon the part. Indeed, I have known this discomfort amount to considerable pain; for it can be well understood how the gauze roller acts like a lever, with the fulcrum just at those places where the sutures pass through the sensitive skin edges. It is largely for this reason that I have almost entirely discarded this method of closing a wound in abdominal operations, where there is the double source of movement, that from within, as from ordinary

respiration, and that from without, as from the contact of overlying clothes, and the natural shiftings in the body position.

I may add yet another detail in connection with the parietal wound, and that is the adoption of a procedure publicly advocated, if not first practised, by Dr. C. J. Bond, of wiping the wound prior to its final closure, with three or four per cent iodine solution.<sup>1</sup> It should only be done after the peritoneal cavity has been securely shut off. Such a practice seems to sterilise the wound edges, and saturate any devitalised tissue created by the incisions, so that infection, either from within or from without, is less likely to occur. Theoretically, it might reasonably be conjectured that the irritative action of the iodine would so injure the tissues as to impair and impede the process of healing. I cannot, however, say that as the result of some years of the plan it has ever seemed to me to act in any way as an impediment to repair; and, certainly, where it is known that the edges of the wound have been infected by purulent discharges, which have at the time of the operation flowed over its surfaces, it seems as if the iodine had had a distinctly beneficial effect upon the contaminated tissues. It cannot, however, be too emphatically enjoined that not the least soiling of the peritoneum with the iodine solution must be permitted. Should this happen, it would almost certainly lead to the subsequent formation of intra-peritoneal adhesions. It is the possibility of this serious sequel to its use for sterilising the skin prior to abdominal operations that has led many surgeons to discard its employment for this purpose. But the objection does not hold when, as has been indicated, the peritoneal edges have been well sutured, and the cavity protected against the possibility of any of the solution finding an entrance.

#### THE PARIETAL AND VISCERAL PERITONEUM.

In considering certain details in connection with the peritoneum we have to remember that we are dealing with a structure which, when injured in any way, has the peculiar property of healing with extreme rapidity. There is probably no other tissue in the body which will heal so readily, no matter how it is injured. This particular feature of the



membrane appears to be brought about by the rapid formation of a cementing material that glues the injured peritoneum to any structure with which it comes in contact; and the greater and more extensive the injury proportionately the firmer and more extensive the area of attachment. Bearing these facts in mind, it will be understood with what care we should deal with all the surgical injuries we inflict upon that delicate and sensitive serous membrane. One, I believe, of the most frequently neglected details is the failure to evert the edges of the peritoneum in suturing the parietal wound. There can be but little doubt that in many of the cases where we find, in subsequent operations, adhesions of the omentum, mesenteries, or bowel to the under surface of the original parietal cicatrix, they owe their existence to the faulty union of the edges of the divided peritoneum. The committal of another error, in the strictly manipulative part of our operative work, conduces to the same result; rather should I perhaps say, tends to augment the possibility of the result. For convenience and ease in execution we are tempted to seize the edges of the divided peritoneum with a pair of forci-pressure forceps, and by means of these drag the deep part of the wound forward so that we are the better able to pass our stitches. This method crushes the tissues; and if it does not leave a necrotic patch it must, at least, so far damage and devitalise the compressed part as to render it the more likely to contract adhesions. To avoid, therefore, this danger, and yet to facilitate the process of deep suturing, I have for some time employed sharp hooks. They inflict no more damage to the tissues than the puncture of the suture needle, and admit of adequate traction being exercised upon the wound edges. Much that has been said in regard to the parietal peritoneum applies to the visceral peritoneum, with this technical difference, however, that in suturing the edges of a visceral wound in nearly all cases, certainly with the bowel, we carefully and accurately invert and not evert the peritoneal edges.

#### THE VISCERA.

As a comparatively remote post-operative complication in dealing with the abdominal viscera, I know of none likely to cause more trouble to the surgeon or more distress to the patient

than the formation of adventitious adhesions. I think that one of the most trying and painful cases I ever met with was where repeated operations failed to prevent the reformation of adhesions, the presence of which eventually wore out the life of the patient solely through prolonged pain and suffering.

Not only, however, is pain a serious sequel to the presence of adhesions, but, as is well known, intestinal obstruction may result from the formation of bands and membranes which may either constrict or strangulate a loop of gut. Not a detail, therefore, should be neglected that would serve in the least degree to prevent so baneful a result of our work upon the abdominal viscera. It is the peritoneum that enters into the structure of the abdominal parietes, omentum, and the mesenteries, that is sensitive to pain. When these parts are subjected to mechanical irritation pain results. It follows, therefore, that when adhesions are contracted between the peritoneum underlying the parietes, or that entering into the formation of the mesenteries, and such constantly mobile parts as those constituting the gastro-intestinal canal, a frequent dragging effect must be exercised; and in the case of the bowel it may not unlikely have a reciprocal stimulating effect, causing unnatural peristalsis, and so produce attacks of colic. What then are the details that should be attended to to prevent the formation of these deleterious agents? First and foremost should be the careful obliteration of all raw surfaces; this, as it concerns incisions, either through parietal or visceral peritoneum, has already been fully dealt with. It is solely a matter of careful and accurate suturing. But there are other lesions only too likely to be overlooked. One is accidental laceration of the visceral peritoneum; it should, therefore, be completely closed, and this, not only for the special reason here discussed, but for the fact that if the serous coat of the bowel wall be not intact, septic microbes can make their exit from the intestinal canal into the general peritoneal cavity, and so set up a local or general peritonitis. A second lesion is that which is the result of undue mechanical irritation of the peritoneum, parietal or visceral, by long exposure, undue manipulation, or prolonged contact with foreign material. To get in as soon as possible and out as soon as you can is not a bad maxim to bear in mind; and to handle as gently as possible such a sensitive and delicate

tissue as the peritoneum is equally as pertinent an injunction to fulfil. But of all the details none are so often neglected as those which concern the employment of foreign material such as dry gauze in the form of compresses, or plugs, or other absorbent tissue, and the retention of blood within the peritoneal cavity. The contact, for even so short a period as half an hour, of a piece of dry gauze with the peritoneum causes that membrane to be so irritated that the initial stages of inflammation are excited; and a localised peritonitis thus set up leads to an adhesion between this involved area and any part with which it may come into contact. Extravasated blood, which may not of itself prove irritative, may, nevertheless, by becoming organised into fibrous tissue, lead to the formation of adhesions just as baneful in their subsequent effects as those induced in the way above described. While we may not be able, in certain cases, to check entirely the formation of adhesions, it is, I believe, possible, by taking certain precautions, very materially to inhibit their production, if not, in many instances, completely to prevent their subsequent development. Solution of citrate of sodium, 3·8 per cent (*i.e.*, about 3 oz. to a little over 4 pints), appears to possess the power of inhibiting the formation of organised tissue for such time as healing of any lesion of the peritoneum can take place. *In vitro* clotting of the blood is delayed by the addition of solutions of sodium citrate; and on this experimental test is based the assumption of its value in abdominal operations. With the hope that what the laboratory has demonstrated as effective will prove equally so in the case of the peritoneal cavity, I have for some time used citrate of soda solutions of the strength indicated for soaking all gauze compresses, plugs, or cloths inserted within the abdomen for various purposes during operation, and for the washing away of blood and other exudates, not hesitating to leave several ounces in the peritoneal cavity before closing.

It will not be out of place to introduce here a few practical remarks concerning the use of drainage-tubes, for they too, to a certain extent, in the damage they can effect, come under the same category as gauze as being foreign material. It is very doubtful whether drainage-tubes are of any service except to drain distinct abscess cavities, and the pelvic cavity when it

is itself practically a large abscess. For when tubes are introduced into the peritoneal cavity all lateral and terminal openings become sealed up by the close application of the bowel, omentum, or mesenteries. With the exception, therefore, of keeping patent a portion of the parietal wound, they are useless for the supposed purpose for which they have generally been introduced. They, however, are not only useless in these particular cases, but may become a source of positive danger, for the contact of the tube with the bowel wall is just as injurious in its effects, if, indeed, not more so, than a plug of gauze. The constant pressure of a hard substance like rubber rapidly leads to ulceration through the bowel wall. I have seen several cases where the subsequent appearance of a faecal fistula, after the removal of a tube which has been retained for some days, has admitted of no other explanation than that it was the result of the insertion of the tube. If, then, it is a useless practice to insert a tube for drainage in this particular class of cases, it is quite a pernicious one to retain it for any length of time. May I mention so trivial a detail as the insertion of a retaining safety pin? How often does one see it stuck right through the centre of the calibre of the tube, soon to become a blocking agent to the outflow of any blood or purulent material. Yet another objectionable detail may be instanced in the insertion of a tube into the peritoneal cavity, and that is, that if it lets nothing out it may let something in. It is believed by some that it is possible for septic organisms to find their way into the abdomen by way of the canal of the tube. The danger is possibly more theoretical than real. However, it adds another objection to the employment of drainage-tubes, except for those particular cases already indicated.

While all the foregoing remarks have reference to the making and closure of a wound, there are a few details in the subsequent treatment of it which are worthy of consideration. If non-absorbent sutures, such as silk or silkworm-gut, are used for uniting the skin edges, not less than ten days should elapse before removal, that is to say, in wounds which have healed by primary union. If an absorbent material is employed there is no need to fix any definite time: the suture may be left until it separates naturally, and is practically wiped away in one of the dressings. Of the two kinds of sutures used for superficial



suturing—the non-absorbent and the absorbent—the latter should only be employed in those cases where undue tension is not likely to exist, and where a septic course of healing is anticipated. The removal of these sutures is painless, and the patient can be reassured upon the point. It is strange how often a patient dreads, and even broods over the thought of the removal of the stitches. I have known patients disturbed for days in anticipation of the supposed pain they would have to endure in their removal. A little tact and care is required to extract a non-absorbent suture so that the patient may suffer as little pain as possible, and the wound not run the risk of infection. To avoid both these contingencies the suture should be just sufficiently pulled at one edge close to the skin by a pair of forceps and then snipped through; continuous traction then withdraws the stitches; and in as much as it is only the embedded portion that passes through the tissues it slips out quite easily. If, however, any part of the suture which has been exposed and roughened by blood clot or in any way infected by septic organisms, is forcibly pulled through the suture track it will cause pain and may infect the wound.

It may be safely said that nearly every surgeon of experience—and the larger and more extensive that experience the more likely is it to be so—will have methods of procedure in his operative work to which he attaches more or less signal importance. Many of these methods may be of the nature of those details which have been under discussion in the preceding remarks. Some of them may be justly open to criticism, adverse or otherwise. But their practical worth will almost entirely depend upon the amount of support they receive, first of all, from the result obtained; and, second, from the reasonableness of the facts adduced in favour of the particular procedure. It is quite possible, indeed probable, that the last detail to which I intend to ask attention will receive adverse criticism on the part of some surgeons; but I must ask due consideration for the reasons assigned before pronouncing judgment. The particular detail to which I now wish to refer is the time that a patient should be kept in the recumbent position after operation. The statement of the case may be briefly expressed thus. There are those who allow their patients to rise at the earliest possible opportunity, say from a week to

a fortnight after operation; and there are those who maintain their patients in the reclined position until they believe that a sound, non-giving cicatrix has formed, which they take to be anything from four weeks onward from the date of operation. Now, it is not that the latter act with any deeper sense of the desire to avoid post-operative ventral hernia—for such is the necessary sequel to a weak cicatrix—but that those who advocate early rising believe that the natural action of the abdominal muscles will assist in both the rapidity of healing and in the soundness of the cicatrix. In incisions which course along the lines of natural cleavage of the muscle fibres or their aponeuroses there is some anatomical support for the contention of those in favour of short recumbency. The “gridiron” incision, often employed for appendicectomy in the right iliac region, and certain transverse incisions, may be given as examples of those in which contraction of the muscles tends to close rather than to open a wound. If it were possible to maintain these muscles, in this particular class of cases, in a state of tonic contraction during the process of healing, there would be little to say against the proposal of letting these patients up as soon as possible. But we know that no such physiological condition exists: and that when contraction is not taking place the wound is subjected to intra-abdominal pressure, the more marked in its influence in the erect than in the recumbent position. It is not possible to apply any of this reasoning to cases where the incision has traversed either muscle or aponeurosis in a direction across and not parallel to their fibres, for contraction only tends to make the wound gape. Such incisions would be those which have a vertical or longitudinal direction in the anterior abdomen. Considering, then, solely the possible beneficial affect of muscle contraction, one feels compelled to conclude that it is slight; and, certainly, very limited in its application to abdominal incisions.

If, then, the recumbent position is the only one that offers the best prospect of securing a sound cicatrix, the natural question to ask is—How long should the recumbent position be maintained? The safest answer would be—Until it is felt that the cicatrix will not yield to the ordinary demands put upon it. But, again, the question arises—How can we determine such a condition of the wound? How can we tell that the cementing material has become so organised into tough fibrous tissue that it will not

yield to any reasonable strain placed upon it? It has long been my practice to take as an indication of the complete organisation of a cicatrix that, when pressed upon, no difference is felt between it and the surrounding parts; or, to express it in another way, whenever there is felt an obvious thickening along the line of the incision there is still soft tissue present which has not yet been fully converted into firm fibrous tissue. The test is a perfectly fair and reasonable one; and one which, I believe, if it were constantly appealed to, would lessen very materially the number of cases of post-operative ventral hernia which we meet with. As regards the actual time required for the acquisition of this perfectly organised and non-giving cicatrix, four weeks may be taken, I think, as the average period for fixed recumbency. Many contingencies may affect the period either in lengthening or shortening it, as, for instance, the age of the patient, and the condition and nature of the wound. Young and healthy patients, and comparatively small and rapidly healing incisions, may be allowed a less period; while adults, and those whose incisions are extensive or whose wounds heal by granulation, from septic or other causes, may require as much as, and often more than, six weeks' recumbency. The mean over all, however, may be taken as four weeks.

While a sufficiently long period of recumbency has, as I have indicated and as I believe, much to do with the subsequent soundness of a cicatrix, there are other causes over which we have little or no control, and which may completely defeat all our efforts in obtaining the required rest and immobility of the part. Such disturbing factors are persistent vomiting after operation, fits of coughing, and undue liberties on the part of the patient during the first few days of convalescence. That post-operative ventral hernia is a frequent sequel to abdominal operations must be the experience of every surgeon who has seen much of this particular class of cases; an opinion by no means necessarily derived from his own work, because it not unfrequently happens that patients who develop these hernias come under the treatment of others than those who originally operated upon them. Considering, therefore, how discommoding these hernias are, and what a serious embarrassment they may prove to women who have to do manual work for their living, it behoves us to exercise every precaution we

possess to prevent such distressing and often painful post-operative complications.

I do not pretend, gentlemen, for one moment to have exhausted all the details which should be attended to in abdominal operations: a more careful surgeon than myself would easily extend the list. Indeed, I should be tempted to gauge the merits of an operator by the length of the list of details to which he would attach importance. I have, however, enumerated a sufficient number, I trust, not merely to gain the credit of being myself a cautious and careful operator, but to excite a little wholesome and useful criticism, and to evoke the ventilation of other details that would benefit us all to regard. It was partly with this prospect in view that I specially wished my contribution this evening to be of the nature of an ordinary paper, neither an address nor a lecture, as the Secretary has honoured me by calling it, for discussion, I believe, is not customary after such. I did my duty in the way of an address when I first took the chair as President six years ago; and now, after an interval of five years, in which the Society has been in a state of suspended animation, it is time we got to work; and I can hardly doubt but that so much good material has been stored up during this period that our session should prove one of exceptional interest, and our meetings an unbroken series of unqualified successes.

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#### REFERENCE.

- <sup>1</sup> *British Medical Journal*, vol. i, 1915, p. 45.
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"CHIEFLY CONCERNING DR. DOVER OF POWDER  
FAME."\*<sup>†</sup>

BY WALKER DOWNIE, M.B., F.R.F.P.S.G.,  
Honorary President of the Society.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—Permit me to tender you my sincere thanks for the great honour you have done me by electing me your Honorary President for the session now being opened.

Dr. Alexander Duncan, in his *Memorials of the Faculty of Physicians and Surgeons of Glasgow*† (published in 1896), refers to the Glasgow University Medico-Chirurgical Society, which, as you know, was established in 1802, as the oldest medical society of which any record can be found in Glasgow.

In my inaugural address as President of the Glasgow Medico-Chirurgical Society‡ in 1907, which took the form of a short history of that Society culled from its minute books, I made mention of the fact that the students of medicine of this University had recognised the advantages of meeting together for the discussion of matters medical in 1802, and that it was not until twelve years later the practitioners of medicine in Glasgow followed their example and founded the Glasgow Medical Society. I further referred to your Society on that occasion as being a Society of undergraduates, and which, notwithstanding its ever-changing membership, has continued its career of usefulness unbroken for well over a century.

Oliver Wendell Holmes, in simple words, reminds us that

"Little of all we value here  
Wakes on the morn of its hundredth year."

Your Society was not only awake on its hundredth birthday,

\* An address delivered before the Glasgow University Medico-Chirurgical Society, 30th October, 1919.

† Now the Royal Faculty of Physicians and Surgeons.

‡ Now the Royal Medico-Chirurgical Society of Glasgow.

but has now advanced well into its second century in full vigour, and I wish it continued prosperity.

Now, to be elected Honorary President of this ancient and active Society is a great honour, but the acceptance of the honourable office carries with it considerable responsibility.

The chief responsibility, as it appeared to me, lay in the choice of a subject on which to address you to-night. I learned that the Committee prescribed no limit, that I was left free to select, if I cared, some purely professional subject, more or less closely associated, it might be, with the department of surgery in which I have chosen to practise: such, for example, as the relationship, if any, between the leptothrix buccalis and keratosis tonsillaris, or to recite to you, from my own experience, some illustrations of injuries and diseases of the throat, nose, and ear, more or less closely associated with the great war, now happily a matter of history.

But I knew that my audience would be composed of men and women at different stages of the medical curriculum of study. Some are but starting off in "the long, long trail," while others are within sight of their examinations, beyond which lies the graduation ceremony.

Again, where the subject selected is of a purely professional character, the address is apt to become a something too closely resembling a class-room lecture to be enjoyed, or even appreciated, by a company of medical students at this hour of night.

I do not, however, desire to say a single word in disparagement of class-room lectures. Far from it. Lectures given in the medical side of a University, whether they are delivered by a professor, or by a mere lecturer like myself, may not always be entrancingly eloquent, but they are, on the whole, interesting, and should be definitely instructive, conveying at the same time something of the personality of the lecturer. And it is so in the case of every outstanding teacher.

But now and again there are exceptions, of which I shall give you one example. I take it from Mr. Alexander Miles' recently published book, entitled *The Edinburgh School of Surgery before Lister*.

In 1720 Mr. Alexander Munro, at the age of 22, was appointed Professor of Anatomy, which in those days included Surgery. By education he was well fitted for the position. He was an

enthusiastic teacher, aroused interest and enthusiasm in others, so that he soon gathered around him a band of young men who in time themselves became teachers, and formed at a later period the nucleus of the Medical Faculty in Edinburgh. He further was largely instrumental in providing hospital accommodation for clinical instruction, of which he recognised the importance, and on account of the influence for good which he brought to bear on medical education in Edinburgh, he is now spoken of with pride as "the Father of the Edinburgh School."

In parenthesis I might remark here that when Dr. Samuel Johnson, in 1773, visited this hospital, founded by Munro and his friends, he observed a board at the main doorway bearing the inscription, *clean your feet*, at which Johnson remarked to Boswell, who had just conducted him over St. Giles, "There is no occasion for putting this notice at the door of your Churches."

Munro was succeeded in the professoriate by his son, Alexander Munro, *secundus*, and he in turn by his son, Alexander Munro, *tertius*. Together, father, son, and grandson, occupied the Chair of Anatomy, including Surgery, in Edinburgh University, for the long period of 110 years. Munro *tertius*, while he delivered the few lectures which constituted the official course of surgical instruction given in the University, practised in Edinburgh as a physician, and it was said of him that although he "lacked neither ability nor accomplishments he was far from being a popular lecturer." He was so insufferably careless and lazy that it is said he absolutely forgot the elements of the subject he professed to teach, and, *listen to this*, "he used to read to his students his grandfather's lectures, written about a century before." Can you imagine Sir William Macewen giving instruction in surgery by reading to his class lectures dealing with that subject written at the time of the battle of Waterloo?

Although I do not intend to read to you any lecture prepared by my grandfather, I propose to-night to go back to the early days of my great-grandfather.

In 1732 a book was published in London under the title of *An Ancient Physician's Legacy to his Country*, bearing the name of Thomas Dover, M.D., as its author. In this book, of which I shall say more later, is given the prescription for, and

the method of preparation of a medicinal powder composed of opium, saltpetre, vitrolised tartar, and ipecacuanha. This powder, still widely employed as a sedative and diaphoretic, is among the official preparations in the *British Pharmacopæia*, under the dual names of Pulv. Ipecac. Co., and Dover's Powder. It has been favourably known to, and largely employed by, doctors and apothecaries for nearly two hundred years, and yet few among those who prescribe it, who dispense it, or who prepare it, know anything of this man whose name it bears.

It is of this Dr. Thomas Dover I intend to speak to-night. The particulars concerning him which I shall relate to you are taken from one of a series of interesting biographical essays written by Sir William Osler, and published under the title of *An Alabama Student*.

Dover was born in Warwickshire in 1660, and after graduating as Bachelor of Medicine at Cambridge about 1683 he began the practice of his profession in Bristol.

At the end of twenty-five years he appears to have saved a considerable sum of money, and it is on account of the manner in which he invested his savings that his name emerges from obscurity.

Nothing is recorded of him until he appears as one of the promoters of a privateering expedition to raid the South Seas in 1708. In this adventure he was associated with a group of merchants, amongst whom were two prominent citizens of Bristol, Alderman Bachelor and Sir John Hawkins.

The company, so formed, fitted out two ships with great care and named them the *Duke* and the *Duchess*. When all was ready Dr. Dover sailed as third in command, being styled Captain Dover; and as he was the owner of a very considerable share of both vessels he was made President of the Council, and had a double voice in its deliberations.

Privateering in those days was not uncommon. Ships were fitted out for the express purpose by men of position and wealth, and sent forth to waylay French and Spanish ships homeward bound with specie and other valuable cargo, and to capture and rob them by intimidation or by violence.

Sheep-stealing was then a capital offence—it was a sordid business; but buccaneering was considered to be a legitimate occupation. It appealed to the sporting instincts, as it bore



promise of adventure and excitement with high stakes. The wealth obtained by these means is said to have laid the foundation of some of our aristocratic families.

We ourselves even now are more than sympathetic towards the pirate and the smuggler, and you know, as Stevenson did, that the mere mention of buccaneering and the Spanish Main stirs within us that spirit of adventure which is still strong in the blood of the natives of these islands. The glamour and romance of the crazy craft, the "swashbuckling and swaggering buccaneer who thrills us with his blasphemies and tickles us to death as his victim walks the plank" seize us, and we conjure up a mental picture of a palm-fringed isle set in blue tropical seas, and regret that such a life is beyond our reach.

But coming back to realities, one can scarcely conceive of a doctor, after having spent twenty-five years in general practice tending the sick and the dying in a large city, forming and financing to a large extent a syndicate to equip ships for privateering purposes, and himself taking a leading part in the operations of such an expedition.

All expeditions of this kind, as we can readily understand, were not crowned with success; and just before Dr. Dover began his preparations a Captain Dampier, who had extensive and intimate knowledge of the Pacific and the Spanish Main, had returned from a disastrous voyage.

Dover's expedition was to be under the command of Captain Woodes Rogers, and this Captain Dampier agreed to go with him as pilot.

Dover's ships set sail in October, 1708, and it is on record that "it was universally allowed by such as are proper judges of such expeditions that there never was any voyage of this nature so happily adjusted, so well provided in all respects, or in which the accidents that usually happen to privateers were so effectively guarded against."

An account of this expedition was subsequently written by the commander, Captain Woodes Rogers, under the title of *A Cruising Voyage Round the World, 1708-1711*, and it was published in 1712. It consisted of but three or four octavo pages, but the narrative contained therein is of great interest. The most interesting part to us is thus told by Captain Rogers.

"We arrived at the Island of Juan Fernandez on 1st February, 1710.\* In the afternoon we hoisted out our pinnace, in which Captain Dover set off to go on shore, though not less than four leagues from the ship. As it grew dark we observed a light on shore, which some were of opinion was from our boat, but it was evidently too large for that, and we hung up a light to direct our boat, firing our quarter gun and showing lights in our mizen and fore shrouds that our boat might find us, as we had fallen to leeward of this island. Our boat came aboard again about two in the morning, having turned back on seeing the light on shore when within a league, and we were glad they had got off so well, as it now began to blow. We were all convinced that the light which we had seen was from the shore, and therefore prepared our ship for an engagement, supposing it might proceed from some French ships at anchor, which we must either fight or want water.

"On the following day the *Duke* was run close to land, and when we opened the middle bay, where we expected to find our enemy, all was clear and no ships either there or in the other bay near the N.E., and we now conjectured that there had been ships there, but they had gone away on seeing us.

"About noon on the 2nd of February we sent our yawl on shore, in which was Captain Dover, Mr. Fry, and six men, all armed, and in the meantime we and the *Duchess* kept turning in, and such heavy squalls came off the land that we had to let fly our top-sail sheets, keeping all hands to stand by our sails, lest the wind should blow them away. As our yawl did not return, we sent the pinnace well armed to see what had occasioned the yawl to stay, being afraid there might be a Spanish garrison on the island who might have seized her and our men. Even the pinnace delayed returning, on which we put up the signal for her to come back, when she soon came off with abundance of crayfish, bringing also a man clothed in goat-skins, who seemed wilder than the original owners of his apparel. His name was Alexander Selkirk, a Scotsman, who had been left

\* Here it may be recalled that the *Dresden*, the last remaining raider of the regular German cruisers which were sent forth with much boasting to sweep British merchantmen from the seas and bring Britain to her knees, was herself destroyed off this same Island of Juan Fernandez on 14th March, 1915.

here by Captain Stradling of the *Cinque Ports*, and had lived alone on the island for four years and four months.

"Captain Dampier told me that he [Selkirk] had been master of the *Cinque Ports*, and was the best man in the vessel. So I immediately agreed with him to serve as mate on the *Duke*.

"He told us he was born in Largo, in the County of Fife, and was bred a sailor from his youth."

He was the son of a shoemaker in Largo, and in that village there stands a monument, by means of which the visitor is informed of the close association which exists between Largo, Alexander Selkirk, and Robinson Crusoe.

After a somewhat noisy youth, he was engaged as sailing master under Captain Stradling in a ship named the *Cinque Ports*, which formed part of an expedition that left Bristol in 1703, under the command of Captain Dampier, bent, I fancy, on buccaneering.

During the voyage that ship landed a party on the Island of Juan Fernandez to obtain wood and water, as had been done on previous occasions. Selkirk, who was one of the landing party, had had a difference with Captain Stradling prior to landing. The quarrel must have been somewhat serious, for it is said that, "together with the ship being leaky, it made him at first rather willing to stay on the island. But when at last he was inclined to have gone, the captain would not receive him." And there he was destined to remain until rescued by Captain Dover and those who accompanied him in the yawl.

The details of Selkirk's lonely life on the island, as given by Captain Rogers, are graphic and quaintly expressed.

"At first he never ate but when restrained by hunger, partly from grief and partly for want of bread and salt." "Neither did he then go to bed till he could watch no longer, the pimenta wood serving him both for fire and candle, as it burned very clear and refreshed him by its fragrant smell." "He built himself two huts of pimenta trees, thatched with long grass and lined with goat skins." "He slept in the larger hut and cooked his victuals in the smaller, and employed himself in reading, praying, and singing psalms, so that he said he was a better Christian during his solitude than he ever had been before, and than, as he was afraid, he would ever be again."

"He might have had fish enough, but would not eat them for

want of salt, as they occasioned a looseness, except cray-fish, which are as large as lobsters and are very good."

He said he had killed 500 goats during his stay, besides having caught many more which he marked in the ear and then let them go. At first he shot the goats, "but when his powder failed he ran them down by speed of foot, an exercise, he says, which cleared him of all gross humours.."

"He came at length to relish his meat well enough without bread and salt. In the proper season he had plenty of good turnips, which had been sowed there by Captain Dampier's men, and had now spread over several acres of ground. He had also abundance of cabbage from the cabbage-palms, and seasoned his food with the fruit of the pimenta, which is the same with Jamaica pepper, and has a fine flavour." "He found also a species of black pepper called malageto, which was good for expelling wind and curing gripes." "He very soon wore out his shoes, and being forced to shift without them his feet became so hard that he ran about everywhere without inconvenience."

After he had got better of his melancholy he sometimes amused himself with carving his name on the trees, together with the date of his being there. He also tamed some kids, and for his diversion would at times sing and dance with them and with his cats.

"At first he was much distressed with cats and rats, which had bred there in great numbers from some of each species which had got on shore from ships that had wooded and watered at the island. The rats gnawed his feet and clothes when he was asleep, which obliged him to cherish the cats by feeding them with goats' flesh, so that many of them became so tame that they used to lie beside him in hundreds, and soon delivered him from the rats."

"During his stay he had seen several ships pass by, but only two came to anchor at the island, which he found to be Spanish. He, therefore, retired from them, on which they fired at him, but he escaped into the woods. Had they been French, he would have surrendered to them: but chose rather to run the risk of dying alone on the island than fall into the hands of the Spaniards, as he suspected they would either put him to death or make him a slave in their mines." This incident formed one of his most exciting experiences. The Spaniards



had landed before he knew what they were, and came so near him that he had much ado to escape: for they not only shot at him, but pursued him into the woods," where he climbed up a tree, at the foot of which some of them made water, and killed several goats, yet went away without discovering him." Had he been discovered and captured on that occasion, the story of the life and strange adventures of Robinson Crusoe might never have been written.

On 25th April of this year (1919) the editor of the *Glasgow Herald* reminded his readers, by means of a leading article in that paper, that on that day occurred the two hundredth anniversary of the publication in London of a volume entitled *The Life and Strange Surprising Adventures of Robinson Crusoe, of York, Mariner*. While it professed to be an autobiography, it was, as most of you know, a highly entertaining novel, based largely on Captain Woodes Rogers' brochure, containing a short but graphic account (published in 1712) of Alexander Selkirk's life and adventures on the Island of Juan Fernandez, with many embellishments. For instance, the story of shipwreck is added in the novel to improve the stage setting, for Selkirk had been left on the island in a fit of sulks, following a quarrel with the commander of his ship; and in order to magnify the dangers which the hero overcame in his solitary plight, it is recorded by De Foe that when Robinson Crusoe made his first visit to the wreck, after his escape, he pulled off his clothes before swimming out to the derelict ship, and when he got on board he went to the bread-room and filled his pockets with biscuits. Here, then, we have Dr. Dover, of Bristol, in the rôle of the captain of a pirate ship, rescuing Alexander Selkirk, *alias* Robinson Crusoe, from his lonely exile, and bringing him back to civilisation and his native land.

After leaving Juan Fernandez, "the expedition sacked the two cities of Guaiacuil, in the assault on which Dover led the van." They also took several prizes, and cruised about the coast from Peru to California, waiting for treasure ships. One of the largest ships they captured they named the *Bachelor*, the name of one of the partners in the venture, and of this Dover took command as chief captain.

To such profitable results had the privateering, the capture

of vessels, and the sacking of cities led, that, when the ships reached England in 1711, the booty realised the enormous sum of £170,000.

A very considerable proportion of this sum fell to Dover, as he was the owner of a large part of both ships, and it is interesting to note that Alexander Selkirk received as his share as mate £800 prize-money.

Dr. Dover was now close on fifty years of age, and the possessor of considerable wealth. On his return to England he resumed practice at Bristol, and from the number of patients he says he visited every day during an epidemic of fever, he must have obtained the confidence of the inhabitants of that city.

There is no record of how long he continued to practise there, but from a statement which occurs in the introduction to *The Ancient Physician's Legacy*, Osler infers that he did not remain for long, but went on a tour of the Continent. He afterwards writes of his wide knowledge of the globe, and says that "if travelling be necessary to make an accomplished physician, I am very sure that I have travelled more than all the physicians of Great Britain put together."

We next hear of him as having been admitted a Licentiate of the Royal College of Physicians of London in 1721, a qualification which at that time enabled a man to practise in, and six miles around, Westminster. Ten more years elapsed, however, before he took up the active practice of medicine in London, by which time he was just over 70 years of age, but full of vigour.

As he had sacked the cities of Guaiacuil leading the van, so he appears to have taken London by storm. And the method by which this was accomplished was the writing and publication of the book of which I have already made mention.

The full title of the book is significant, and appealed directly to the public. It is *The Ancient Physician's Legacy to his Country, being what he has collected himself in forty-nine years of practice*, with the added statement "that the diseases incident to mankind are described in so plain a manner that any person may know the nature of his own diseases, together with the several remedies for each distemper faithfully set down." The book, he further states, "was designed for the use of all private families."

The book made a great stir in London, and soon formed the subject of conversation at almost every coffee-house. It also aroused much ill-feeling, and was the cause of bitter controversy amongst members of the medical profession, who were attacked, rebuked, and held up to derision in its pages. The pamphlets of defence and counter-attack which followed the appearance of the book gave added interest and gaiety to the daily gatherings of the habitués of the many coffee-houses in the city. His methods of treatment and his cures became the talk of the town, and attracted many to the Jerusalem coffee-house in the Strand where Dover saw his patients.

In this book there are three outstanding features which may interest us. First, there is the formula for the famous powder which still bears his name. He recommended it in the treatment of gout. The dose of this powder, as given in the present-day *British Pharmacopœia*, is 10 to 15 grains. But Dover's directions are—"Dose from 40 to 60 or 70 grains given in a glass of white wine Posset going to bed, covering up warm and drinking a quart or three pints of the Posset. Drink while sweating." (Posset or wine-whey is the whey which results from the curdling of milk by the additions to it of port or sherry.) The proportion of opium in the original prescription and in the Dover's powder of to-day is the same—namely, 1 in 10. But the opium used in Dover's time may have been less pure, and so may have contained less morphine. Fully aware of the heroic proportions of the dose which he recommended, he remarks that "some apothecaries have desired their patients to make their wills and settle their affairs before they venture upon so large a dose as from 40 to 70 grains." But, he says, "as monstrous as they may represent this, I can produce undeniable proofs where a patient of mine has taken no less a quantity than one hundred grains, and yet has appeared abroad the next day."

The second feature is his advocacy of quicksilver as a medicine. It formed his specific in almost every disease, and he prints laudatory letters received from patients as proof of its efficacy. The use of crude mercury as a medicine, if we except grey powder, blue ointment, and blue pill, has practically ceased, but Dover used it freely, ordering an ounce or an ounce and a quarter of quicksilver daily, "believing that it freed the patient

from all vermicular diseases, opened all obstructions, and made a pure balsam of the blood."

To illustrate the freedom with which it might be administered, he mentions the case of a captain "who had lived by the doctor's direction on asses' milk, syrup of snails, and such stuff," took for his cough and shortness of breath an ounce a day, and took altogether "one hundred and twenty pounds weight."

But some of his critics were not slow to hint that quicksilver did not a little to hasten the end of some of his patients, and in one fatal case in particular to whom Dover had given, between 3rd and 8th May, within two ounces of two pounds of mercury. In his reply to the criticism he says, "I challenge you to show when I have lost three patients for the past five years, when I was first called either in acute or chronic cases."

The third point of interest is the direct and outspoken way in which he criticises the methods of the practitioners of London, and the bold way in which he eulogises his own prowess.

"Let me but come to people," he says, "as early in this distemper [dropsy] as they generally apply for relief from other physicians, and it shall be cured."

To fully understand many of his diatribes, it must be remembered that in those days the apothecaries were the general practitioners, who not only visited the sick, but dispensed their own medicines: and in serious cases called in a physician or surgeon, whose prescriptions they also dispensed. "The apothecaries," he says, "generally speaking, have it in their power to recommend the physician, which is the wrongest step the patient can possibly take. The physician, to gratify the apothecary, thinks himself obliged to order ten times more physic than the patient really wants, by which means he often ruins his constitution, and too often his life: otherwise, how is it possible an apothecary's bill in a fever should amount to forty or fifty or more pounds? Nay, I have been creditably informed that several of those apothecaries have declared they would never call in a physician but what should put in fifteen or twenty shillings a day into their pockets. What must the conscience of such physicians be that would forget their reputation and everything that is dear to them by cheating for others. I would venture to say neither Sydenham's nor Radcliff's bills did ever amount to forty shillings in a fever, and



yet they recovered their patients without the rule of vomiting, bleeding, and multiplying blisters."

He waxed furious against the "unhuman method of blistering. In fevers I prescribe the cool regimen, and I would have cold bathing grow as universal as inoculation."

He further says, "I never affronted any apothecary, unless in ordering too little physic; and the curing a patient too soon is, in their way of thinking, an unpardonable crime. I must confess I never could bring an apothecary's bill to three pounds in a fever; whereas, I have known some of their bills in this disease amount to forty, fifty, and sixty pounds. If they can't cure with less charges, I can't forbear saying that I have the same opinion of their integrity as I have of their understanding."

*The Ancient Physician's Legacy* was published first in 1732. It must have held a high place on the list of its publisher's "best sellers," for a second edition was called for in the following year, and further editions appeared with regularity until 1742, when a sixth edition was issued. On the title page of this, the last edition, the author speaks of his fifty-eight years of practice. He is supposed to have died in that same year, and so must have been then over 80 years of age.

From the particulars of Dover's life which I have related to you, beginning at the time he emerged from obscurity to set about the preparations for his successful buccaneering voyage, until his death at an advanced age, and after fifty-eight years of medical practice, you will agree that while he was not over scrupulous in many of his actions, he was a man of determination, ambitious, resourceful, and as dogmatic in his statements and claims as the average bone-setter.

He was said to be a good fighter, and a hard hitter, but while he trounced his opponents and condemned their practices, he never failed to direct attention to the merits of his own methods.

Again, while he holds up the apothecaries to public opprobrium as mercenaries on the ground of the high charges they exacted for medicines dispensed by them, and for the excessive prescribing of the physicians, whom he accused of being in league with them for personal gain, he surely forgot the manner by which he himself had acquired great wealth.

But Dr. Dover's critics were not slow to note the inconsistencies in his life. Referring to the sacking of Guayaquil, and to his practice, which he himself describes, of bleeding copiously in the treatment of the plague which had broken out on board his ship, one says, "I think the Doctor had much better have left out his bravado of having taken two cities by storm, unless he thinks it an honour to a physician to kill and slay, and after to plunder the innocent, those who never wronged him, and to carry off the spoil: a good prelude this to the bloodshed after among his own men."

The hostility of the apothecaries, according to his own accounts, arose from his being "always inviolably attached to the interest and welfare of my patients, and entirely regardless of those gentlemen's unwarrantable gains."

His buccaneering expedition, in which the care and foresight displayed in the equipment of the ships to ensure their safety and the safety of their crews was successful, brought great wealth to all interested, and to himself chiefly.

But it was a piratical adventure, with thieving on the grand scale as its one object, to ruthlessly make rich by robbery, by violence, and by murder when necessary. Very unlike to this were the aims and objects which animated so many of the students and graduates of this and other schools and universities as they enrolled themselves in the various units of our army and navy, to join in that great adventure which began on 4th August, 1914. In those men and women the thought of self-interest was absent, their one object, whether they served by fighting the foe, tending the sick, the wounded, and the dying, protecting our shores, or conveying supplies to the forces at sea or on land, was for God, the right, and the honour and safety of their country. Many of those who thus went forth have returned to their homes unscathed: numbers who have returned bear deep marks of the wounds they received, and of the dangers through which they have passed: but many thousands of our bravest and best, whose individual deeds of heroism may never be known to us, lie buried in foreign lands.

We may think that as a man Dr. Dover had many faults, faults in great measure, perhaps, the product of his time; but he rose to a position of eminence, and his fame as a physician stood high and spread beyond the confines of London. Proof of

this is to be found in the *Opera Omnia* of Ballonius, a book published in Geneva in 1762—twenty years after Dover's death. This work is dedicated to Dr. Dover, and there he is extolled as one of the most distinguished physicians of the time. This is made all the more marvellous by the fact that he did not begin to practise as a physician in London until he was 70 years of age.

I have given you in this address some details of the varied life of Dr. Thomas Dover, but they were not given with the intention of holding him up to you as a pattern for your imitation, although his energy, his industry, and his constant desire, to which he gives expression, for the interest and welfare of his patients, are to be applauded. I chose to speak of him, as I thought you might be interested to learn something of a man whose name is in daily use by doctors and chemists to indicate a widely used pharmaceutical compound, and whose name, further, is associated with that hero, whose free and adventurous life on the Island of Juan Fernandez was the envy of our boyhood.

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PERSONAL EXPERIENCES OF THE OCULAR  
SEQUELÆ OF MALARIA.

BY WM. HISLOP MANSON, M.A., M.D.,

Fellow of the Royal Faculty of Physicians and Surgeons, Glasgow ;  
Surgeon, Glasgow Eye Infirmary.

PREVIOUS to the outbreak of war cases of malaria in ordinary practice were met with only exceptionally in this country. Now that the troops are returning from malarial countries such cases will bulk more largely in everyday practice. To those who have not had much experience of malaria a brief *résumé* of the ocular sequelæ met with in a series of not less than 12,000 cases of this disease which passed through my hands may be of some interest.

Primary attacks of malaria are frequently very atypical, and it is well worth remembering that they may occur many months after the patient has been exposed to the infection. Practically every attack is followed by a slight icteric tinge of the conjunctiva. As a rule, this tinging of the conjunctiva is only visible when the lower lid is drawn down, though it sometimes happens that the inter-palpebral area of the conjunctiva is quite yellow. The yellow colouring involves the retrotarsal fold and extends forward on to the bulbar conjunctiva. The colouration disappears as the patient recovers. This colouration of the conjunctiva is a valuable suggestive symptom when dealing with patients who have had a pyrexia of uncertain origin, especially if they have been exposed to the infection.

Of the sequelæ which attacked the eye, ulceration of the cornea was the most frequent, though fortunately, on the whole, it was not very common. It was never seen accompanying the primary infection. The patient usually had had anything from twenty to fifty relapses of malaria. The infecting parasite was of the benign tertian variety, though some of the cases had also a malignant tertian infection superadded. The type of the



attack upon which the appearance of the ulceration of the cornea followed was always clinically of the benign tertian variety.

The symptoms usually start with hyperæmia and watering of the eyeball, followed by the formation of a small bleb pushing up the epithelium of the cornea. The condition generally seen is where there is a small streak of ulceration on the cornea. The ulceration may not progress further than this, but in the most pronounced cases there is a definite dendritic ulcer. The formation of this ulcer is most easily observed by the use of a 2 per cent solution of fluorescein. When the ulcer reaches this stage it may involve the deeper layers of the cornea. The unfortunate thing for the patient is that these ulcers are usually situated in the centre of the cornea and cause marked diminution of vision. Once they commence they are liable to recur with each subsequent attack of malaria. They are very painful and heal very slowly. Iritis frequently accompanies the ulceration. The treatment of the ulcer depends mainly on the treatment of the malaria. Locally, the best treatment was douching with normal saline and instillation of atropine. The application of absolute alcohol, as has been frequently recommended, was not found of any great value. It generally resulted in the patient writhing in agony for some time after the application.

In one case herpes zoster ophthalmicus accompanied the ulceration. It did not occur alone, though one might have expected to meet it, as herpes occurs frequently on the lips and chin in malaria.

Iritis apart from corneal complications did not occur in this series.

Intra-ocular hæmorrhage was very rare. It only occurred in two cases. The hæmorrhages were sub-hyaloid, and in one case both eyes were affected. Both patients were suffering from infection by the malignant tertian parasite.

In three cases lesions of ocular nerves were present, which I regarded as sequelæ of malaria. These lesions appeared shortly after definite attacks of malaria. The Wassermann reaction in each case was negative. The patients were all men who were perfectly healthy until the onset of the attacks of malaria and had good family histories. On inquiry no

suggestion could be obtained which might have diverted the diagnosis into any other channel. One was a case of paresis of the external rectus muscle, and greatly improved under anti-malarial treatment. The second was a paresis of accommodation which recovered completely. The third was a total ophthalmoplegia of the left eye occurring ten days after an attack of malaria. The paralysis did not recover.

To the administration of quinine in large doses certain injurious effects are attributed, viz. :—

1. Toxic amblyopia.
2. Optic atrophy.
3. Quinine amaurosis.

No case of the first two conditions was observed, although it was the custom to give up to 60 grains of quinine by the mouth each day for a week, in three doses of 20 grains.

Of the third condition I have seen two cases. One made a complete recovery. In the other total blindness resulted. In both cases it was estimated that the sufferers had taken at a minimum in one dose 80 grains of quinine.

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## CURRENT TOPICS.

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THE NEW UNIVERSITY CHAIR OF APPLIED SCIENCE.—At a meeting of the General Council of the University on 12th February the draft ordinance for a Chair of Applied Science was approved. The foundation of the Chair is due to the generosity of Sir John Cargill, who, as the Principal pointed out, recognised that the department of natural philosophy, which passed eleven hundred students through its hands in the course of one year, was in danger of becoming seriously overloaded, certainly it was understaffed. The foundation of the Chair provided very effective relief in sub-dividing the work. Since the Principal took office no fewer than thirteen new Chairs had been founded, and there were expectations of more.

UNIVERSITY LECTURESHIP IN ELECTRICAL DIAGNOSIS AND THERAPEUTICS.—The University Court recently were offered through Dr. J. H. Nicoll the sum of £5,000 to establish a lectureship in Electrical Diagnosis and Therapeutics in the Western Infirmary. It was proposed in the letter conveying the gift that the lecturer to be appointed should devote himself or herself exclusively to practice in electrical work. We understand that an appointment will shortly be made.

RANGE of SERVICE BY PANEL DOCTORS.—The Referees appointed by the Scottish Board of Health have recently given an important decision in a question arising between the Insurance Committee for the Burgh of Glasgow and the Local Medical Committee, under Section 50 of the National Health Insurance Medical Benefit Regulations (Scotland), 1913. A panel doctor had claimed special remuneration for suturing the tendons of the fingers, and the question was "whether the operation is a service of a kind which can, consistently with

the best interests of the patient, be properly undertaken by a general practitioner of ordinary professional competence and skill."

Evidence was led on 19th January, the Insurance Committee being represented by Mr. W. M. Turnbull, solicitor; and the Local Medical Committee by its secretary, Dr. A. K. Glen; Mr. J. M. Turnbull, solicitor; and Mr. D. H. Battersby, solicitor. The position of the Insurance Committee was that the operation of suturing tendons of the fingers was not one requiring special skill. After considering the evidence, the Referees stated in their report that they were satisfied that the operation of suturing tendons of the fingers was not a service which could, consistently with the best interests of the patient, be properly undertaken by a general practitioner of ordinary competence and skill. They referred to the risk of septic infection extending along the tendon sheath to the palm or fore-arm, and to the possibility that the wound might have to be enlarged owing to retraction of the proximal end of the tendon; they considered that operators in such cases ought to possess a knowledge of surgical technique not usually found in the general practitioner, and they showed that the general practice for many years had been to send such patients to an Infirmary for operation. They therefore gave as their decision that no general or absolute rule could be laid down that such an operation could, consistently with the best interests of the patient, be undertaken by a general practitioner of ordinary competence and skill.

#### EDUCATION OF THE PUBLIC IN PROBLEMS OF PUBLIC HEALTH.

—A special course of lectures on public administration has recently been organised by the Glasgow and West of Scotland Commercial College. The fourth of the series was delivered by Dr. A. K. Chalmers, Medical Officer of Health, in the Athenaeum Hall on 11th February. With the comprehensive title, "The State, the City, and the Citizens, in relation to Public Health Problems," many view-points were obtained. The massing of people together in restricted areas created problems soluble only by action over wide areas and long spaces of time. The National Health Insurance Act introduced a new view into the relationship between the State and the individual in regard to health, because it reinforced the old Poor-law discovery of last century



that poverty and disease were inextricably correlated, and that where disease was long present poverty was near at hand, and that poverty, again, was the origin of much ill-health. If the nation was to reap the full fruits of medical science, better organisation of home medical attendance and great provision of institutional accommodation were imperatively called for.

**THE TRAINING OF MIDWIVES.**—In the daily press there recently appeared a short report of the third annual meeting of the Scottish Midwives' Association, presided over by the Duchess of Montrose, and taken part in by Professor Murdoch Cameron and Dr. Robert Jardine.

The Association operates by institution of local branches. These now number 13, and the total membership is 650. The chairwoman pointed out the prominent part accorded to trained midwives by a Ministry of Health. The responsibilities of the midwife were great, as in so many instances the health of both mother and child was entrusted to her in a vital period. Certificated midwives nowadays fully realised these responsibilities, and recognised how influential they could be in educating young mothers in the care of infants, and so lessening the too great infant mortality.

Professor Cameron urged midwives to train mothers to do their duty by their children by proper feeding and by better ventilation of houses.

The meeting provided a highly interesting and instructive sign of the times in carrying by a large majority a resolution that the minimum fee for attendance in midwifery cases charged by members of the Association be not less than twenty-five shillings, except in the case of soldiers' wives.

**TRADE UNIONISM FOR NURSES.**—Old-fashioned people—and doctors and all others whose work is personal and intimate are disposed to old-fashionedness in its best sense—view with disquiet the spread of trade unionism, and its latter-day departure from the original ways of friendly co-operation and mutual help, into the dubious regions of political turmoil and the ever-ready strike. The professions have hitherto escaped the temptation to accept the new idea. In Glasgow, at least, a

recent effort to persuade the medical profession to believe in trade unionism for itself was not, so far as we know, conspicuously successful. We are interested, therefore, to learn from the daily press that a "Mass Meeting of Nurses" (the phrase is ominous) was called on 14th February to consider the question of supporting the "Professional Union of Trained Nurses" which has been formed in London. About 200 nurses representative of all departments of professional nursing work attended.

Miss J. B. N. Paterson, a member of the Provisional Committee of the Union, was present, and dealt with its aims and objects. She said that if they were to have any profession to boast of they must have a strong trade union of all trained nurses co-operating, the weak with the strong, to raise and safeguard the profession. Nurses, she said, were exploited from the moment they entered hospital, probationers being regarded more as a means of running a charitable institution cheaply than as students studying for a profession. Their employers had formed The College of Nursing, Limited, and it was only a fitting answer that the nurses should form a trade union.

Mr. Rosslyn Mitchell, a member of Glasgow Corporation, who spoke out of the wealth of his experience in trade union activities, pointed out that if the Trained Nurses Union found it impossible to stand by themselves they had a perfect right to place their case before other combined professional trade unions in the country. They could ask for the moral, political, and financial support of the whole of the organised trade unions of the country.

Miss C. H. McAra, honorary organiser of the Union for Scotland, also addressed the meeting, and after a considerable amount of discussion the meeting unanimously agreed that the Professional Union of Trained Nurses already formed in London should be supported.

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—We have received from the secretary of this active Association a copy of the report for the year 1920. The Association consists of Poor-Law Medical Officers in Scotland, and its objects are to raise the status of Poor-Law Medical Officers, and to provide a channel through which all defects in the Poor-Law Medical Service may be brought to light, and discussed with a view to

their removal. The Association keeps a vigilant watch on vacancies in the Poor-Law Medical Service, and never hesitates to warn intending applicants for appointments if the terms of service are unsatisfactory.

The question of superannuation for all employees of Local Authorities is a burning one, and has been brought before a Governmental Committee for England only. This Association is preparing material for a similar Committee of the Scottish Board of Health which may possibly be appointed by the Secretary for Scotland, and it hopes to have an opportunity, if the Committee comes into being, of presenting its views. Dr. W. L. Muir, of Dennistoun, has served for many years as secretary, and he still continues to hold the office.

LITERARY INTELLIGENCE.—The second edition of Berkeley and Bonney's *Textbook of Gynæcological Surgery* is announced for early publication by Messrs. Cassell & Co., Limited. Considerable expansion was required to bring the book into line with the authors' present practice, and upwards of 100 new illustrations, from drawings by Dr. Dupuy, have been inserted, bringing up the number to 489, in addition to 16 colour plates.

His Majesty's Stationery Office regret that, the orders for Sir George Newman's *Report on Preventive Medicine* being so numerous, they have been unable to despatch copies as quickly as they would have wished. All orders are being dealt with as promptly as possible, in rotation, and as supplies are received from the printers. It is not anticipated that there will be more than a few days' delay.

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## MEETINGS OF SOCIETIES.

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### THE ROYAL MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

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SESSION 1919-1920.

MEETING I.—7TH NOVEMBER, 1919.

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*The President, MR. A. ERNEST MAYLARD, in the Chair.*

PRESIDENTIAL ADDRESS: THE PRACTICAL SIGNIFICANCE OF  
ATTENTION TO DETAIL IN ABDOMINAL OPERATIONS.

BY MR. A. ERNEST MAYLARD.

Mr. Maylard's address appears as an original article on p. 97.

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MEETING II.—5TH DECEMBER, 1919.

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*The Vice-President, DR. DOUGLAS RUSSELL, in the Chair.*

I.—THE PATHOLOGY OF IRRITANT GAS-POISONING, WITH  
MICROSCOPICAL DEMONSTRATION.

BY DR. J. D. MCNEE.

The speaker first remarked that the subject was chosen with the hope of interesting and assisting those now dealing with the late effects of gas-poisoning in the case of war pensioners. He referred to the extent of his own experiences in France, which dated from the first gas attack delivered north of Ypres in April, 1915, and were continued until the end of the war while serving on the Chemical Warfare Medical Committee. A list of most of the noxious gases used by the Germans, either



in clouds or shells and trench-mortar bombs, was handed round, but the speaker stated that his remarks would be confined to the lesions brought about by chlorine, phosgene, and "mustard gas" (dichlorethylsulphide). He said that soldiers very seldom were able to state what variety of gas had been used against them, but the following facts might assist Pension Officers in coming to a conclusion:—

Chlorine was used in 1915 as a drift gas, but as soon as protective respirators were issued its lethal effects were lost, and it was replaced largely by phosgene in 1916. Phosgene was used as a drift, shell, and trench-mortar gas; when used by the first method it was always mixed with chlorine. This gas was continually employed up to the armistice. Mustard gas first came into action in July, 1917, and was only effective in shells.

The speaker then dealt briefly with the lesions produced by these three gases.

Chlorine, he stated, was well known to be a completely irrespirable gas. Its presence was known immediately, and a respirator gave full security. Without a respirator, as in early 1915, its irritant effects were entirely confined to the lungs, an extreme disruptive emphysema and intense pulmonary œdema being produced. The fatal results were generally due to the œdema, which so filled up the bronchi as to practically drown the patient. In the lighter cases, which survived, an acute bronchitis generally followed, and in some instances bronchopneumonia developed.

With phosgene the effects on the lungs were somewhat similar, but presented definite differences. The emphysema was not so extreme as with chlorine, but the œdema was even more intense. The lesion was entirely confined to the alveoli, the lining of the bronchi frequently escaping injury. An additional important pathological change was found in the lungs, namely, the occurrence of hyaline thrombosis in many of the alveolar capillaries. A similar hyaline thrombosis of capillaries was in some instances found in the brain, leading to the presence of multiple small ring-shaped hæmorrhages. In rarer cases, also, similar thrombi were seen in the glomerular capillaries of the kidney. The peculiar acute sudden circulatory failure in cases of phosgene poisoning was also referred to.

"Mustard gas," the speaker said, was not really a gas at all, but a brownish-green fluid with a very high boiling point ( $217^{\circ}$  C.). It was contained in bottles embedded in the high explosive within a shell. The extremely high boiling point was of great importance, since the fluid, when sprayed on garments, &c., would remain there for days without evaporating. The effects of this poison on the pulmonary system were as follows:—After a latent period (often twenty-four to forty-eight hours) an intense inflammation was set up in the trachea and bronchi. The mucous membrane sloughed, and a false membrane, consisting of fibrin and leucocytes and quite like a diphtheria membrane, was poured out. This membrane formed a very suitable pabulum for the growth of micro-organisms, and a septic capillary bronchitis and broncho-pneumonia was in this way brought about.

The speaker then dealt briefly with the effects of "mustard gas" on the eyes, and on the skin of the body generally.

In summing up, emphasis was laid on the fact that all men who have been *really* gassed by any of the three irritants dealt with in detail must be expected to have a permanent weakening of resistance of the respiratory system to infections generally.

A microscopic demonstration illustrating the lesions of gas-poisoning was set out, and numerous drawings were also shown by way of illustration.

## II.—THE FATALITY OF PEPTIC ULCER, AND THE IMPORTANCE OF EARLY DIAGNOSIS.

BY DR. JAMES CARSLAW AND DR. JOHN M. COWAN.

This communication will appear as an original article in a future issue of the *Journal*.

## III.—ILLUSTRATIONS OF CERTAIN DISEASES AND INJURIES OF THE NECK OF THE FEMUR, AND A CASE OF COXA VARA.

BY MR. HENRY RUTHERFURD.

Mr. Rutherford showed skiagrams as follows:—

1. Fracture of surgical neck of femur in man, aged 50 years; slow recovery, but good, without operation; largely promoted by massage.

2. Enchondroma of head of femur; no operative interference; man fit for work.

3. Old central dislocation of femur in man of 35 years, in which extreme adduction was treated by subtrochanteric osteotomy.

4. Injury to head of femur in child of 6 years.

5. Fracture of neck of femur in child of 8 years, with non-union.

6. Case of coxa vara (Francis M., aged 17 years), due probably to non-suppurative acute osteomyelitis. This patient states that about seventeen months ago he was kicked by a horse on the left hip. The kick did not knock him down nor cause him to take to bed. Some time later he noticed his left leg getting shorter, and that he was limping; there was pain in the leg in walking, but this was got over by the use of a high boot.

Adduction well marked; no possibility of abduction. It is remarkable how, in spite of this, he manages to walk erect. The angle of the neck with the shaft is not more than  $45^{\circ}$ , and there is no evidence of anterior convexity of the neck with outward rotation of the shaft. The neck is long and straight, which probably explains how the adduction of the limb is not more extreme. The lower half of the head of the femur is expanded outside the acetabulum and seems rarefied.

The case is shown not merely as an extreme form of this affection, but in respect of the probable etiology. There is a history of acute osteomyelitis of the right tibia four years ago. Scars over the tibia are sound and well puckered, and the bone has recovered its normal contours. It seems that the story of trauma may be disregarded in regard to the deformity of the left femur neck, and that this may be explained on the supposition that the neck or region of the trochanter had been the subject of an acute osteomyelitis not issuing in suppuration, and had been so affected as to yield under the body weight.

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## REVIEWS.

*The Action of Muscles.* By WILLIAM COLIN MACKENZIE, M.D.,  
F.R.C.S., F.R.S. Edin. London: H. K. Lewis & Co., Limited,  
1918. (12s. 6d. net.)

THE great and rapid development which orthopædic surgery underwent during the period of the war has rendered an exact knowledge of the action of muscles even more necessary than formerly. Electro- and mechano-therapeutics have steadily improved, and are being applied by workers in numbers that are being added to daily. Thus, Mr. Mackenzie's book on *The Action of Muscles* appears timeously, and will appeal to a wide circle, which has increased very largely within the last year or two.

The author treats his subject in no superficial fashion. He gives us views that are the fruit of laborious research and experiment. Many of our fondly cherished traditional ideas on the functions of particular muscles must go to make way for the new and more rational views which Mr. Mackenzie presents.

All of his views, however, will not be immediately accepted. On several questions he must expect to experience opposition. To take one example: it has usually been accepted that the biceps brachii is both a supinator and a flexor. The author would have it that the muscle has no part in the action of flexion, but we are far from satisfied, even from a study of his own demonstrations, that he has established his case.

Comparative anatomy is frequently brought into use by Mr. Mackenzie in his search for exact functions, and he gives several excellent illustrations of neat dissections of parts of various animals.

The book is an interesting and important work, the style and arrangement are good, and the printing and the illustrations are



worthy of the high reputation of the publishers. We have confidence in recommending it to all who desire to obtain a thorough grasp of muscle-function.

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*A Text-Book of First Aid and Emergency Treatment.* By A. C. BURNHAM, M.D. New York: Lea & Febiger. 1917. (\$2.)

THIS is a well-written book, dealing with the accepted principles and practice of first aid.

Despite the number of excellent handbooks on this now popular subject, we believe that there is still room for this American contribution to the literature.

Dr. Burnham goes a little further than most have hitherto done, and includes in common emergencies not only what are usually understood by "accidents," but also minor illnesses, such as neuralgia, earache, toothache, boils, hiccough, &c. There is no attempt, however, at making the book one of the "domestic physician" type, and even medical practitioners may consult it with the assurance of gleaning useful hints.

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*Dental Surgery and Pathology.* By J. F. COLYER, F.R.C.S., L.D.S. Fourth Edition, with Illustrations. London: Longmans, Green & Co. 1919. (32s. net.)

In the preface, Mr. Colyer remarks that since the third edition appeared eight years ago there has been a steady advance, chiefly by the young men, in oral hygiene, which many practitioners fail to grasp due to excessive tooth conservatism. He expresses his idealism in the somewhat commonplace truism that the primary object of dental treatment is the prevention of dental disease! The fact that, in these very years, there has been a pandemic spread and increase of pyorrhœa—the second greatest scourge of the teeth—among the specially war-involved nations is an awkward commentary on the alleged advance of preventive dentistry. This edition is to be commended as having a more just apportioning of space to the various subjects

treated. It also continues to exhibit the careful and painstaking eclecticism of former editions. The book belongs to the Baconian or empirical school, and rests on the basis of recognised authorities and experiments. It is calculated to satisfy the worship of past and the approbation of living authorities, displaying the usual polite acknowledgments of references and quotations made. Thus, the book itself comes to have the air of authority: so when the examiner asks the candidate, "Where did you learn this?" he replies, "In Colyer." In this reply, at anyrate, the student has the statute on his side, for by it he is free to espouse any theory he likes, and, for that part, practise it in the future. Demonstration in dentistry, as in other sciences and arts, should depend on first principles, and not on the opinions of notable writers miscalled authorities. What the dentist wants to know is whether caries and pyorrhœa are specific diseases or not. In regard to caries, Mr. Colyer confesses "that, as yet, nothing is definitely known as to the exact relation of the various organisms to the carious process." It should be added that the chapters on normal dentition and on varieties of the teeth, being subjects that belong to dental anatomy, should be withdrawn, and the space given to the consideration of the definition, general relations, and history of dental pathology and surgery—subjects which at present are omitted.

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*Babies in Peril, or Mother and Infant Welfare Centres.* By EDITH M. BENNETT, formerly Superintendent of the St. Pancras School for Mothers, &c. London: John Bale, Sons & Danielsson, Limited.

THIS pamphlet consists of articles which appeared in *Maternity and Child Welfare* in November, 1918. We have read it with very great interest. The advice contained in it is very commonsense and practical to a degree. We are glad to see the author is opposed to visiting the people in their own homes indiscriminately. She prefers to get to know them first at the Centre, and then to gain an entrance to their homes.

We strongly recommend this pamphlet to all who are doing child welfare work.

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

EDITED BY GEORGE MACINTYRE.

### M E D I C I N E.

**Thyroid Extract in Nocturnal Enuresis.**—In the *Canada Lancet*, September, 1919, reference is made under "Therapeutic Notes" to nocturnal enuresis in children, and to the value of thyroid extract in meeting this condition. In 1909 Leonard Williams published proof of the value of this remedy. He definitely connected nocturnal enuresis with thyroid insufficiency, and showed that other evidences of this condition may be discovered as a persistently subnormal temperature, deficiency in height, weight, and mental powers, &c. Williams advises an initial dose of gr.  $\frac{1}{4}$  thrice daily. Firth and M'Ready have, since then, published confirmatory reports. Firth's best results were obtained in those cases where enuresis had persisted almost from birth, and where the children were backward.—DOUGLAS K. ADAMS.

**Post-Typhus Complications.**—In the *Tropical Diseases Bulletin*, 15th September, 1919, attention is drawn (A. Devaux) to the nervous complications of exanthematic typhus. . . . "A study of post-typhus nervous complications admitted to the neurological centre at Jassy during the winters of 1916-17 and 1917-18, from which it would appear that the unknown infective agent has a very particular predilection for nervous tissues. The clinical forms are numerous and varied. During one period of seven months at Jassy 215 cases were collected and classified."—DOUGLAS K. ADAMS.

**Changes of Cerebro-Spinal Fluid in Cases of Typhus.**—In the same journal is given a description of changes in the cerebro-spinal fluid observed by G. Heilig in cases of typhus. The following points are noted :—

1. Increased pressure (not invariable).
2. Cellular polymorphism.
3. Leuco-lymphocytosis.
4. The occurrence of "seal rings" seated on the leucocytes and small mononuclear lymphocytes.—DOUGLAS K. ADAMS.

**Home-Bred Malaria.**—In the *Tropical Diseases Bulletin*, 15th August, 1919, is a review of S. P. James' work on malaria contracted in England.

Reference is made to a native malaria existing in the estuarine tract of the Medway-Thames independent of the exotic infection imported from abroad. "Malarious houses" were discovered in Queenborough, Kent. "Clinically the native British malaria seems to be remarkable for its mildness and its reluctant hold. Some of the cases were so mild that they would not have been noticed but for a house-to-house survey."—DOUGLAS K. ADAMS.

**Observations on the Cerebro-spinal Fluid.**—In the *Journal of the American Medical Association* (1st November, 1919), Drs. Horrick and Dannenberg publish their observations on the cerebro-spinal fluid in a large series of cases of certain acute infections, and also in miscellaneous diseases. Their conclusions are as follows:—

"1. A review of the literature and a personal study of 76 cases not resulting in meningitis show beyond question that the cerebro-spinal fluid often gives evidence in increased pressure, pleocytosis, and heightened globulin content, of a reaction on the part of the leptomeninges to the infective agents or toxins of a large number of miscellaneous acute diseases not ordinarily causing true meningitis.

"2. These diseases are lobar and broncho-pneumonia, influenza, tonsillitis, the exanthems, scarlet fever, measles, variola, herpes zoster, parotitis, typhoid fever, sepsis, arthritis, pleurisy, migraine, reaction to typhoid inoculation, and others.

"3. The cerebro-spinal fluid shows variation from the normal in about one-third of the cases studied.

"4. Most, but by no means all, of the patients with subarachnoid reaction have clinical meningismus (meningitis serosa Dupré). On the other hand, many examples of meningismus are without pronounced changes in the cerebro-spinal fluid.

"5. The greatest caution should be used in making a diagnosis of meningitis or poliomyelitis from fever, meningismus and the changes in the cerebro-spinal fluid mentioned. Cases with less than 100 cells should be viewed with scepticism, unless clinical, epidemiologic, or other laboratory evidence is decisive."

—DOUGLAS K. ADAMS.

### *Books, Pamphlets, &c., Received.*

A Guide to Gynecology in General Practice, by Comyns Berkeley, M.A., M.D., M.C.Cantab., F.R.C.P.Lond., M.R.C.S.Eng., and Victor Bonney, M.S., M.D., B.Sc.Lond., F.R.C.S.Eng., M.R.C.P.Lond. Second edition. London: Henry Frowde and Hodder & Stoughton. 1919. (31s. 6d. net.)

The Microscopic Anatomy of the Teeth, by J. Howard Mummery, D.Sc.Penn., M.R.C.S., L.D.S.Eng. Oxford Medical Publications. London: Henry Frowde and Hodder & Stoughton. 1919. (25s. net.)

The Cambridge Note Book for Practical Biology (Zoology), edited by J. Stanley Gardiner, M.A., F.R.S., and L. A. Borradaile, M.A. Sixth edition. London: Henry Frowde and Hodder & Stoughton. 1919. (5s. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDED 21ST FEBRUARY, 1920**

	WEEK ENDING			
	Jan. 31.	Feb. 7.	Feb. 14.	Feb. 21.
Mean temperature, . . .	39·2°	42·8°	41·7°	42·1°
Amount of rainfall, . ins.	1·17	0·72	2·75	0·93
Deaths (corrected), . . .	340	334	326	290
Death-rates, . . . . .	15·9	15·7	15·3	13·6
Zymotic death-rates, . . .	0·2	0·5	0·6	0·4
Pulmonary death-rates, . .	4·6	3·8	3·9	3·3
DEATHS—				
Under 1 year, . . . . .	73	72	77	61
60 years and upwards, . .	108	101	98	90
DEATHS FROM—				
Small-pox, . . . . .	...	...	..	...
Measles, . . . . .	1	1	7	4
Scarlet fever, . . . . .	1	3	...	...
Diphtheria, . . . . .	3	6	4	2
Whooping-cough, . . . .	...	2	1	3
Enteric fever, . . . . .	...	...	...	...
Cerebro-spinal fever, . . .	1	...	...	...
Diarrhœa (under 2 years of age),	2	6	2	2
Bronchitis, pneumonia, and pleurisy, . . . . .	87	64	72	70
CASES REPORTED—				
Small-pox, . . . . .	...	...	...	...
Cerebro-spinal meningitis, .	2	2	3	...
Diphtheria and membranous croup, . . . . .	52	44	63	45
Erysipelas, . . . . .	45	26	29	30
Scarlet fever, . . . . .	94	90	68	74
Typhus fever, . . . . .	...	...	...	...
Enteric fever, . . . . .	4	2	2	9
Phthisis, . . . . .	42	37	48	44
Puerperal fever, . . . .	12	4	5	2
Measles,* . . . . .	220	379	443	480
Ophthalmia neonatorum, .	20	12	21	19

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

No. IV. APRIL, 1920.

ORIGINAL ARTICLES.

REPORT ON THE WORK OF THE OPHTHALMIC  
DEPARTMENT OF 3RD SCOTTISH GENERAL  
HOSPITAL, GLASGOW, DURING THE PERIOD FROM  
27TH MAY, 1915, TO 1ST FEBRUARY, 1919.

BY A. MAITLAND RAMSAY, M.D., F.R.F.P.S.G.,  
Major, R.A.M.C. (T).,

AND

J. HAMILTON McILROY, M.B., D.Sc.,  
Assistant Ophthalmologist, 3rd Scottish General Hospital.

I.—INTRODUCTORY REMARKS.

THE Eye Department of 3rd Scottish General Hospital was opened in May, 1915, and the work was carried on in a special block in which a refraction room, dark room, outdoor consultation room, and an operating room were improvised. In April, 1916, an optician orderly was attached, and after that date all spectacles were supplied by the Army Spectacle Department, whereas previously they had been obtained from local opticians. On no occasion were spectacles prescribed unless it was thought that the man's efficiency as a soldier would be increased by their use.

In September, 1918, the Eye Department of 4th Scottish General Hospital was transferred to 3rd Scottish General Hospital, and after that date No. 33 Ophthalmic Centre undertook all the eye work in the Western Command.

The statistical tables include only the patients of whom records have been kept in the Eye Department. In addition, a large number of men were seen in the medical and surgical wards of the Hospital, as well as in the hospitals auxiliary to 3rd Scottish General Hospital. Reports of the eye condition of these men were written on A.F.'s 11237 for the information of the M.O. i/c of the case. The great majority of the cases treated were simple external diseases and errors of refraction, and the principal part of the work consisted in discriminating between those men that were fit and those that were unfit for duty, and placing them in their proper category. For that reason the number of operations performed was small in proportion to the total number of patients under treatment. No operation was performed unless the man's military efficiency was thereby to be increased.

## II.—STATISTICS.

### (a) *General*—

	Indoor.	Outdoor.	Total.
Number of patients treated,	992	3,085	4,077
Number of patients to whom glasses were issued through the A.S.D., <sup>1</sup>	209	1,093	1,302
Number of patients classified as unfit for military service (on vision), <sup>2</sup>	...	53	53
Number of "illiterates,"	...	13	13
Number of patients recommended for admission to the Eye wards, <sup>3</sup>	...	199	199

### (b) *List of diseases*—

#### 1. *Errors of refraction*—

	Indoor.	Outdoor.	Total.
Ametropia—Hypermetropia,	16	432	448
Hypermetropic astigmatism,	68	522	590
Myopia,	23	382	405

1. *Errors of refraction (continued)*—

	Indoor.	Outdoor.	Total.
Myopic astigmatism, . . . .	47	365	412
Mixed astigmatism, . . . .	11	90	101
Squint, . . . . .	44	170	214
Spasm of ciliary muscle, <sup>4</sup> . . . .	...	18	18
Monocular amblyopia <sup>5</sup> —			
Right eye, . . . . .	...	153	153
Left eye, . . . . .	...	237	237

2. *Injuries of the eyes (G.S.W.)*

	Indoor.	Outdoor.	Total.
Injury to one or both eyes, . . . .	80	...	80
Enucleated before admission, . . . .	78	89	167
Traumatic conjunctivitis, . . . .	12	...	12
Subconjunctival ecchymosis, . . . .	11	3	15
Wound of cornea, . . . . .	8	6	14
Gas-poisoning, shell, . . . . .	47	27	74
Traumatic coloboma of iris, . . . .	3	14	17
Traumatic cataract, . . . . .	35	15	50
Dislocation of lens, . . . . .	1	5	6
Hæmorrhage into vitreous, . . . .	9	5	14
Rupture of choroid, . . . . .	9	19	28
Detachment of retina, . . . . .	6	5	11
Traumatic neurosis (shell shock), . .	18	14	32
Hemianopsia (due to injury to skull), .	5	...	5
Traumatic optic neuritis, . . . .	17	15	32
Traumatic optic atrophy, . . . .	19	14	33

3. *Diseases of the eye*—

	Indoor.	Outdoor.	Total.
Blepharospasm, . . . . .	2	22	24
Blepharitis marginalis, . . . .	35	41	76
Ptoxis, . . . . .	1	3	4
Lagophthalmos, . . . . .	5	4	9
Ectropion, . . . . .	12	3	15
Entropion, . . . . .	2	...	2
Trichiasis, . . . . .	1	2	3
Chalazion, . . . . .	17	9	26
Hordeolum, . . . . .	13	6	19
Symblepharon, . . . . .	2	2	4
Epiphora, . . . . .	7	6	13
Dacryocystitis, . . . . .	15	10	25



3. *Diseases of the eye (continued)*—

	Indoor.	Outdoor.	Total.
Lachrymal fistula, . . . . .	1	...	1
Conjunctivitis, . . . . .	107	104	211
Conjunctivitis, gonorrhœal, . . . . .	2	...	2
Conjunctivitis, granular, . . . . .	10	11	21
Pterygium, . . . . .	1	1	2
Ulcerative keratitis, . . . . .	112	50	162
Interstitial keratitis, . . . . .	5	...	5
Corneal opacity, . . . . .	30	102	132
Herpes corneæ, . . . . .	1	2	3
Keratoconus, . . . . .	...	5	5
Episcleritis, . . . . .	3	1	4
Iritis, syphilitic (Wassermann +), . . . . .	32	...	32
Iritis, non-syphilitic, . . . . .	35	13	48
Iritis, sympathetic, . . . . .	3	...	3
Glaucoma, primary, . . . . .	7	...	7
Cataract, congenital, . . . . .	10	22	32
Cataract, senile, . . . . .	1	...	1
Aphakia, . . . . .	2	13	15
Choroiditis, . . . . .	6	43	49
Choroiditis, suppurative, . . . . .	1	...	1
Chorio-retinitis, . . . . .	...	7	7
Retinitis pigmentosa, . . . . .	...	7	7
Night-blindness not associated with pigmentary changes, . . . . .	6	20	26
Retinitis albuminurica, . . . . .	...	1	1
Neuro-retinitis, . . . . .	...	7	7
Retro-bulbar neuritis, . . . . .	2	2	4
Paresis of ocular muscles, . . . . .	11	2	13
Nystagmus, miners', . . . . .	13	30	43
Nystagmus, congenital, <sup>6</sup> . . . . .	3	3	6
Amblyopia, tobacco, . . . . .	14	43	57
Amblyopia without apparent cause, <sup>7</sup> . . . . .	2	173	175
Albinism, . . . . .	...	3	3
Microphthalmos, . . . . .	1	...	1
Phthisis bulbi, . . . . .	...	4	4

*Explanatory notes.*—(1) Prior to April, 1916, glasses were not supplied to soldiers through the Army Spectacle Department, and for a considerable time after provision was made for the

supply the strength of lenses sanctioned did not exceed 6D sph. In the tables, only those glasses issued by the A.S.D. are included.

(2) In 1914 and 1915 many men were discharged from the army on the ground of defective eyesight, but after the visual standards were lowered (A.C.I.'s 211 and 1,371 of 1917, and 421 of 1918), very few were disqualified for service on account of defects of vision.

(3) The cases recommended for admission to the Eye wards were those suffering from the more chronic and serious forms of eye disease, viz., blepharitis, conjunctivitis, iritis, effects of gunshot wounds, as well as the more obscure and difficult refractive conditions, for which it seemed advisable that the eyes should be kept under the influence of a mydriatic for several days. The great majority of the latter cases were returned to their units fit for general service, whereas on admission vision was stated to be so poor that they were eligible only for a labour category.

(4) This group contains those cases in which spasm was the main feature. The majority of those men suffered from a low degree of astigmatism, their vision on enlistment having been up to standard, and in many instances the spasm came on during a course of instruction in signalling.

(5) It has been thought to be of interest to classify those suffering from right-eyed amblyopia as distinguished from left-eyed amblyopia, in view of the inability of the former to shoot from the right shoulder.

(6) In some cases the nystagmus was detected only on ophthalmoscopic examination, but in the majority—miners' nystagmus and congenital nystagmus—the oscillations of the eyeballs were easily seen on simple inspection of the eyes.

(7) It is not implied that the men in this class were necessarily malingerers, but only that no sufficient reason could be discovered for the amblyopia, and in most instances a greater amount of visual acuity than that originally admitted was obtained by special methods of examination. Only a small proportion were undoubted malingerers; the great majority were simply making the most of an existing defect. Some of those included in this class were cases of functional amblyopia in which the defective vision was ascribed by the patient to

gas-poisoning. No lesion could be detected at the time of examination, however: slight blepharospasm and photophobia were sometimes present, and the patients were of a highly nervous and excitable nature.

### III.—GENERAL REMARKS ON CASES.

Few acute cases of gun-shot injury to the eye were treated in 3rd Scottish General Hospital owing to the fact that it was situated at a long distance from the actual fighting. Nevertheless many of the cases admitted were of great interest, and a few brief summaries are appended.

#### *Gun-shot Wounds—*

- (a) With injury to one or both eyes.
- (b) With loss of eye.
- (c) With hemianopsia.

(a) 1. Of those with injury to *both* eyes, three illustrative cases may be given.

CASE I.—G.S.W. (shell burst)  $2\frac{1}{2}$  months before admission. The man was buried and much knocked about, but when admitted to hospital no external wound of the face or head was evident, and the fundi appeared healthy. A well-marked central scotoma was present in either eye. Excentric vision was R.E. =  $\frac{6}{6}$ : L.E. =  $\frac{6}{6}$ . The scotoma persisted when the patient was discharged. During his stay in hospital the man often tried to use a rifle to aim at a figure at from 200 to 300 yards distance, but he always lost sight of the object when he looked along the barrel of his rifle. The case presents a resemblance to *commotio retinæ*, but any change in the fundi on examination by the ophthalmoscope was much less than is usual in such cases. The only feature to be noted was an unusual sharpness of outline in the foveæ centrales, and the conclusion arrived at was that the amblyopia was psychical.

CASE II.—G.S.W. with double optic neuritis. Seven months previous to admission patient was hit by a bullet which passed through the right ear and across the neck, emerging on the left side. When the man was admitted his wounds were so septic, and the eyeballs so seriously damaged, that there was little hope

of saving any useful vision. The track of the bullet was easily visible. The symptoms were dimness of vision, loss of hearing in the right ear, with headache, giddiness, and occasional nausea.  $V = \frac{6}{56}$  in either eye. The pupils were equal and active. The fields of vision were restricted peripherally to about one half normal. The ophthalmoscope revealed well-marked double optic neuritis. In this case the bullet had caused injury to the brain, with secondary double optic neuritis.

CASE III.—This man was severely wounded at Ypres on 20th September, 1917, by the bursting of a shell. He was admitted to 3rd Scottish General Hospital on 7th October, 1917, suffering from septic wounds on face, head, back, and left arm. The left eye had light perception, but the right was blind. Both eyeballs had been penetrated: the lens was swollen and cataractous: there was prolapse of the iris in the right: in both the intra-ocular tension was reduced, and there was tenderness on pressure over the ciliary region. The lids were so septic that nothing could be done except to keep the eyes clean, instil atropin, and apply antiseptic fomentations. On 20th February, 1918, in the right eye the lens had dissolved sufficiently to enable the man to see  $\frac{6}{12}$  (with suitable correction), but in the left a membranous band stretched across the pupil, and vision only equalled hand movements. A capsulotomy operation was performed, and sight improved to  $\frac{4}{60}$ , but owing to opacity of the vitreous, details of the fundus could not be seen with the ophthalmoscope. This case is an illustration of what can be done to save sight in badly damaged eyes, by simple treatment, when the man himself is quite healthy.

2. Of those cases in which one eye alone was injured, the other eye being unaffected, many examples might be given. The following will suffice for illustration:—

CASE I.—Right eye injured six months previous to admission, the lower jaw being fractured at the same time. On admission, vision was only perception of light. The pupils were active, and dilated under atropin except at the upper and outer aspect in the region of a small corneal cicatrix. The lens was partially opaque. The fundus, where it was visible, was normal in appearance.

CASE II.—Optic nerve atrophy and restricted fields of vision



following a bullet wound, which extended from the inner canthus to the region just in front of the external auditory meatus of the same side. The hard palate and malar bones were fractured, and the jaw articulation injured so that the mouth could not be opened more than half an inch. The right ear was totally deaf, and there was mental confusion. The pupil was sluggish to direct stimulation by light, but was active consensually. Vision was  $= \frac{6}{60}$ . The field of vision was restricted to about one fourth normal. There was marked pallor of the optic disc in the affected eye.

CASE III.—This man was injured by a bullet at Cambrai a week before admission. The left temporal region had been lacerated and the eyeball injured. A large rupture of the choroid could be seen to the outer side of the disc after a large clot in the vitreous had become absorbed. The vision in the eye ultimately became  $= \frac{6}{60}$ .

CASE IV.—Penetrating wound of the eyeball received six days before admission. A wound was seen at the outer aspect of the sclero-corneal margin, with prolapse of the iris and ciliary body. There was superficial and deep injection of the conjunctiva, with photophobia and lachrymation. The iris was discoloured, the pupil contracted, and the aqueous muddy. Tenderness was felt on pressure over the ciliary region. X-ray was negative for foreign body. The prolapse of the uveal tract was thoroughly excised, and the wound covered by conjunctiva. Atropin was instilled and a bandage applied. The pupil dilated fully, and after some weeks the inflammation passed off. The vision became  $= \frac{6}{18}$ . The fundus showed no pathological changes.

CASE V.—This man had been injured in action about twelve months before admission. There was fracture of the bones of the orbit, rupture of the choroid, and detachment of the retina. There was a cicatrix along the eyebrow. The pupil was active consensually, but not on direct stimulation. The optic disc was pale, and the retinal vessels thread-like. The choroid was ruptured at its outer aspect. The other eye was normal.

(b) *G.S.W. followed by loss of one eye.*

CASE I. Three months before admission this man was struck by a shell at Ypres. The right eye had to be enucleated on the day following the injury; at the same time iridectomy was

performed on the left. On admission to 3rd Scottish General Hospital there was opacity of the left cornea and exudate in the pupil. A view of the fundus could be obtained, and pigmentary changes were seen in the macular region. On discharge four months later the vision was =  $\frac{6}{6}$ .

CASE II.—Five months previous to admission this man had received a gun-shot wound by which the left eyeball was completely destroyed and the socket damaged. On admission there was a sinus discharging pus into the nose and throat. Vision of right eye (corrected) =  $\frac{6}{24}$ . The field of vision was contracted to at least one half. There was a waxy pallor of the optic disc, and probably the condition of the right eye was present before enlistment. (There was a history of injury to this eye from a gunpowder explosion twelve years previously).

CASE III.—This man was wounded at Loos two and three-quarter years before admission. He had been taken prisoner, and the eye was enucleated in Germany three months after injury. He was admitted to 3rd Scottish General Hospital on account of discharging socket. The track of the wound (bullet) was apparently through the right eye, emerging about 3 inches below the right sterno-mastoid muscle. The left ear was discharging, the tympanic membrane being affected.

The socket was treated with 1 in 1,000 solution of methylene blue, a method of treatment which has proved extremely efficacious in cases of discharging socket, other remedies being of little use.

(c) *G.S.W. followed by hemianopsia.*—Injury to the occipital lobes is often attended by hemianopsia, and the two cases herewith quoted are good examples:—

CASE I.—This man had sustained a severe gun-shot wound of the head, with compound comminuted fracture of the skull in the occipital region. Severe headache and sleeplessness ensued, and several operations were performed, three small pieces of bone being found in the brain substance. After the removal of these the patient was extremely ill—temperature 105°, sighing respirations, and cyanosis with semi-consciousness for a fortnight. The condition improved, but the headache persisted. He then began to complain of inability to see to the *right*.

On admission to 3rd Scottish General Hospital the fields of vision showed well-marked right homonymous hemianopsia. No inversion of colour sense was detected. The head pain continued severe. Vision was  $= \frac{6}{12}$  in R.E., and  $\frac{6}{9}$  in L.E. The patient was discharged from the ophthalmic wards, but after some time was readmitted suffering from well-marked double optic neuritis, more pronounced in the left eye. A progressive intracranial lesion was evidently still in play. The optic neuritis subsided and the man recovered in every respect, except that the right-sided hemianopsia remained.

CASE II.—In this case there had been a gun-shot wound with fracture of the skull at Gallipoli two months before admission. The man was admitted on account of giddiness, headache, and dimness of vision. He was discharged improved, but four months later had to be readmitted suffering from a return of the symptoms. There was a history of a fit shortly before readmission. The pupils were equal: the direct reflex was absent in the right eye, but was present in the left; consensual reaction was present in the right eye. The convergence reflex was present, but the right eye tended to turn outwards after the eyes were fixed on a near object for a short time.

Attacks of transient blindness were complained of. The fields of vision were much restricted peripherally, and exhibited complete right-sided hemianopsia in both. Ophthalmoscopic examination: R. optic disc paler than L., and veins more congested, but there was no marked abnormality in the fundi to explain the great defect in vision.

*Gas poisoning and shell-shock amblyopia.*—The use of mustard gas, dichlor-ethyl-sulphide [ $C_2H_4Cl_2S$ ], in warfare was responsible for a very large proportion of ophthalmic casualties. The gas, whether in low concentration in the air or by direct contact from splashes of the liquid vehicle, is a powerful vesicant. A marked feature of its action is that there is a delay of from 2 to 6 hours before the irritant effects are experienced, and consequently there is no warning of danger.

The first symptoms in the acute stage are those of intense photophobia, with lachrymation: a feeling of sand in the eyes, and heaviness in the lids. Headache is troublesome, and later there is great swelling of the lids and conjunctiva, with pain,

blepharospasm and extreme lachrymation. The bulbar conjunctiva is chemosed, the iris is congested, and the pupil contracted. The cornea may be steamy, and in very severe cases shows patches of opacity in its substance. The worse cases are usually associated with laryngitis and bronchitis, and the skin over different parts of the body may be burnt. Usually, in the end, there is good recovery: after reaching a height the inflammation gradually subsides in three or four weeks. Relapses, however, may occur, and the patient may be disabled for months.

The treatment in the acute stage is frequent bathing with hot borax solution, and the application of an alkaline ointment. Rest in bed in severe cases, and dark glasses at first, or even a protective bandage may be necessary. For the pain and photophobia, cocain (2 per cent) and adrenalin (5 per cent) may be prescribed. The pupil should be dilated with atropin—early response to the drug being a favourable sign of progress in the disease. A 2 per cent solution of nitrate of silver painted over the everted eyelids quickly diminishes the amount of purulent discharge (which is always the result of secondary infection).

As soon as the acute stage is over, the patient should be encouraged to dispense with dark glasses, and to be up and about as much as possible. There is danger of the persistence of functional amblyopia, particularly in the more nervous subjects. One cannot discount the presence of a certain amount of shell-shock in these cases, and "bracing" treatment has to be exercised with judicious care.

Two interesting cases of gas-poisoning may be cited:—

CASE I.—This patient—a pale, delicate-looking lad—was admitted to 3rd Scottish General Hospital on 22nd May, 1918. He was gassed at Arras on 11th May, 1918. Conjunctivitis was very acute, and blepharospasm was extreme when any attempt was made to face the light. In spite of treatment the acute symptoms persisted, and the cornea became blistered opposite the palpebral fissure. There was little or no abatement in the severity of the symptoms until the middle of August, but it was not until the beginning of October that the man could be discharged. By that time, however, he was quite well.

CASE II.—This man was admitted on 19th July, 1918. He had



been gassed two months previously at Ypres. The eye symptoms were so acute that the man lay with his face buried in a pillow, and covered his eyes with his hands for fear of the light. The eyes constantly streamed with water, but in spite of the severity of the symptoms there was no lesion of the cornea. He suffered much from his throat and chest, and the skin of the lower limbs had been badly burnt. By the end of two months the eyes had completely recovered, but the man had to be transferred to a medical ward on account of the persistence of bronchial catarrh.

*Amblyopia due to traumatic neurosis.*

This condition has been well known since the beginning of the war. There is sudden loss of sight after exposure to heavy continuous artillery fire. The patients are almost without exception nervous and excitable; they are worn out and highly strung at the time of injury, and suddenly collapse. In many instances the man has been buried, but he rarely bears any trace of physical injury. He is dazed, and has no recollection of what has happened: he complains of loss of sight, and in the more severe cases he is deaf and dumb. Blepharospasm is usually so pronounced that examination of the eyes is very difficult. External examination shows little amiss, but the ophthalmoscope reveals slight congestion of the optic discs, and this is followed in several weeks by pallor. Sight returns gradually, but much more slowly than speech and hearing. One eye may recover more quickly than the other. Intermittent glimmering of light and peculiar colour sensations are usually experienced before vision returns. Although the patient may be almost blind, he can usually guide himself about, and that dissociation of the elements of vision suggests a certain amount of hysteria. These patients are in no sense malingerers: the nervous system has been subjected to a strain greater than it can bear, and has broken down completely. Rest, good food, and judicious encouragement usually bring about restoration to health in a few months, but the progress of the case and the ultimate result largely depend upon the early recognition of the true nature of the condition.

Two cases of shell-shock amblyopia, the result of a gas-attack, may be related:—

CASE I.—Four weeks before admission patient was buried for twenty-four hours through the bursting of a high explosive shell. On admission vision was barely  $= \frac{6}{60}$ . The optic discs were congested and swollen, and the retinal vessels tortuous. The fields of vision were restricted, but there was no inversion of the colour sense. The man steadily improved, and on discharge vision was  $= \frac{6}{18}$ .

CASE II.—Three months before admission the man was buried by the bursting of a shell. Sight was lost in the right eye immediately after the injury, and vision disappeared suddenly from the left a week before admission. Only the barest light perception was admitted, but both pupils, although somewhat dilated, responded actively to light, and the ophthalmoscope revealed nothing more than slight pallor of the optic discs. There was constant blepharospasm. Although so blind that he considered himself helpless, the man was able when sent to his ward to guide himself about without coming in contact with his fellow-patients or with any articles of furniture. In a few weeks he admitted that he could see the windows of the ward, and from that time the sight gradually improved, until after three months' treatment he was discharged with visual acuity in either eye  $= \frac{6}{9}$ .

### *Sympathetic inflammation.*

In civilian ophthalmic hospital practice sympathetic inflammation is not uncommon, and from the nature of gun-shot injuries it would not have been surprising to find that in military experience the percentage of such cases was high. It is of moment, however, to note that in the course of four years' work in a large military hospital the occurrence of sympathetic inflammation—threatened or established—has been extremely small: in fact, the cases met with were not more than 0·3 per cent of the total indoor patients. The prompt treatment carried out on the field has done much to lessen the disastrous results of shrapnel wounds, and continuous treatment during the dangerous period of inflammation has checked the development of the toxins that lead to the incidence of sympathetic ophthalmia. The cases given below illustrate three typical manifestations of the disease. In the first case the patient

was admitted with sympathetic inflammation in progress, the "exciting" eye having been enucleated eighteen months before admission; the second case is one of sympathetic *irritation*, for which enucleation of the "exciting" eye was performed in this hospital; and the third case is one in which sympathetic inflammation occurred a month after the injured eye had been enucleated in this Hospital.

CASE I.—This man had lost his right eye through a shrapnel wound received at Gallipoli about eighteen months before admission. The shrapnel had been removed after the injury, but the eye had to be enucleated six months later on account of threatened sympathetic inflammation. He had had several recurrent attacks of uveitis for which he was treated in a military hospital, and was discharged from the service. On admission to 3rd Scottish General Hospital (as a pensioner) the eye showed well-marked sympathetic uveitis. Vision was = P.L. only; the pupil was fixed; the media were too hazy to allow of the fundus being seen. Intravenous injections of kharsivan were given, and biniodide of mercury was administered internally. The vitreous cleared, and the ophthalmoscope revealed the presence of choroiditis especially at the upper part of the fundus. The patient was sent to a convalescent home, his vision at the time being =  $\frac{6}{6}$ . He was re-admitted, however, with the history of having awakened from sleep one morning to notice a haze in front of the eye. His vision was now =  $\frac{6}{12}$ . Floating bodies were seen in the vitreous (? hæmorrhages). The vitreous cleared up under treatment, and vision became =  $\frac{6}{9}$ . There was an alcoholic habit in this case, and the man was advised to avoid all stimulants; indulgence in alcohol was followed by the occurrence of intraocular hæmorrhage on several occasions while the man was under observation in Hospital.

CASE II.—In this case the left eyeball had been ruptured at Gallipoli by a piece of shell. The eyelid also had been injured, resulting in a scar with ectropion. On admission the eyeball was shrunken and tender; the vision in this eye was = *nil*. The other eye was irritable, but the pupil was active, and yielded fully to atropin. The vision in the right eye was =  $\frac{6}{6}$ ; the optic disc was pink, and the retinal veins congested. The left eye was enucleated, and the socket healed smoothly. The right eye

recovered perfectly, and the patient was discharged on furlough four months later.

CASE III.—Pte. A., æt. 24 years. He stated that in the beginning of October, 1918, while he was handling a Lewis gun in action, he was struck on the left eyeball. Sight was lost immediately after the injury. He was admitted to 3rd Scottish General Hospital on 12th October, 1918, suffering from severe irido-cyclitis in the left eye. The lens was opaque; the globe was tender to touch, and manifestly shrinking. The eye was x-rayed, but no foreign body was discovered. Treatment by rest, fomentations, and atropin resulted in no improvement, and the eye was enucleated on 23rd October, 1918. A graft of sclerotic was implanted in Tenon's capsule, and stitched to the recti muscles. Healing was uneventful, and the right eye showed no sign of irritation until four weeks after the operation, when the man complained of pain during the night, and without any warning the eye suddenly became injected, and vision became rapidly reduced to  $\frac{1}{16}$ . There was deep pericorneal injection; the iris was congested, and after the pupil was dilated by atropin, one or two posterior synechiæ were seen. Spots appeared on the posterior surface of the cornea, and when examined by the ophthalmoscope the fundus was hazy, and the retinal blood-vessels large and tortuous. The usual treatment was adopted, and in three weeks all signs of inflammation had disappeared, and vision had improved to  $\frac{6}{6}$ . A relapse occurred, however, a fortnight later, and on this occasion the signs of irido-cyclitis were much more acute, the condition of the eye being very critical. A blood count was made on several occasions, but except for a decided lymphocytosis there was nothing characteristic. In addition to the usual local treatment with mercurial inunction, neo-kharsivan was given intravenously. The dose was 0.6 grm., and was repeated on three occasions at intervals of one week. At the end of this course of treatment all signs of inflammation had again disappeared, and vision was  $\frac{6}{6}$ . There was no further relapse, and the patient was discharged on 29th January, 1919.



NOTE ON A CASE OF DIFFUSE SYMMETRICAL  
SCLERODERMA.

By JOHN HENDERSON, M.D., CH.B., F.R.F.P.S.G.,  
Visiting Physician, Royal Infirmary.

THIS case is noteworthy on account of the relative rarity of the disease in such a complete form, but also because of the extreme degree of emaciation which resulted before death ensued from pulmonary complication. The particulars of the case are as follows:—

Mrs. W., æt. 46 years, a housewife, was admitted to the Royal Infirmary on 29th May, 1919, with complaint of pain and stiffness in several joints, but especially in the wrists and ankles. Her trouble began seven years before with pain and stiffness in the wrists, and later also in the fingers, with some swelling. The ankle-joints were next involved, followed by pain in the knees and small joints of the feet about three years ago. Owing to increasing stiffness in these latter joints she had great difficulty in walking. Last year her neck also became stiff, with a consequent limitation of movement of the head. Six months before admission the joints of the hands became so much swollen that she was deprived of the use of her hands, and a month later pain and stiffness in the legs and feet made it impossible for her to get about. Thereafter she was confined to bed. The skin, which throughout life had been dry, became markedly so, and now showed flaky desquamation. During the whole course of her illness obstinate constipation had been a troublesome feature, the bowels moving only once in four or five days.

On admission she was found to be very thin, anæmic, and hollow-eyed. Her height was 4 ft. 9 in. and her weight 4 st. 8½ lb. The skin generally on the trunk was dry, firm, and hard, and could not readily be pinched up. This was specially marked

over the upper parts of the chest and back, and on the neck. The skin over the abdomen showed whitish areas alternating with darkly pigmented spots, and all over showed tendency to cracking and desquamation. On the extremities the skin was more atrophic, very thin, glossy, and parchment-like, but tightly stretched over the underlying tissues, and thus interfering with movements. This was specially marked over the wrists and hands, where the "hidebound" condition was such as to produce almost complete ankylosis of the joints. The fingers were semi-flexed and rigid, and any attempt to extend the joints gave rise to pain. The skin of the hands was dusky except over the interphalangeal joints, where, owing to its extreme tightness, the skin was anæmic. The elbows and shoulders were stiff, but capable of limited movement. The left knee-joint showed a very limited range of movement, but the right was more freely movable. The ankles were almost ankylosed, while the toes were very stiff and rigid. The feet, like the hands, showed lividity. Tactile sensation generally was unimpaired, and there was little or no cutaneous secretion. Muscular atrophy was extreme and very diffuse. The teeth generally were carious, and pyorrhœa was well marked. The tongue was red, smooth, and glazed. The stomach was slightly dilated, the liver and spleen apparently of normal size. The heart was of normal size, but its sounds were weak though free from murmur. The pulse was regular both in force and rhythm, but of very low tension. The chest was very flat, with prominence of scapulæ and ribs. Some flattening of percussion at the apices was noted. All over the lungs the R.M. was harsh, but specially so at the right apex. A few scattered rhonchi were audible on both sides. The patient had a short, dry cough unaccompanied by spit. Temperature on admission was subnormal. The urine was acid in reaction, its specific gravity 1008, and on testing it showed no abnormal ingredient.

The further progress of the case was slowly but steadily downwards. She was very susceptible to chills, and had little bursts of pyrexia associated with catarrhal signs in the chest, but never any spit. Towards the end the temperature was irregularly febrile. Occasional râles of rather clicking quality were noted at the left apex. The skin condition became steadily

worse despite abundant local treatment. There was a tendency to cracking and fissuring, especially in the neighbourhood of joints and over the clavicles. In this latter situation the skin gave way entirely, until there was an extensive raw area involving a considerable part of the neck and upper chest. The face became affected, with impaired mobility of the lips and eyelids, pinching and retraction of the nose, and a general rigidity



of expression. Her weight steadily diminished, the last record obtainable—a fortnight before death—being 3 st. 12 lb. During the final stage of the illness deficient movement of the chest was observed, probably due to fixation of thoracic muscles.

Some idea of the extreme degree of emaciation may be derived from the following measurements taken a few days before death:—Neck, 9 in.; chest, 24 in.; waist, 18 in.; hips (around),

26 in.; upper and fore-arm (maximum), 4½ in.; thighs (maximum), 8 in.; calves (maximum), 6 in.

*Post-mortem* examination revealed no gross lesion except in the lungs, where at the apices there were certain changes. At the right a healed tubercular area was observed, while at the left there was a focus of very acute tubercular bronchopneumonia with commencing cavity formation. The condition of the various glands was reported on by Professor J. H. Teacher,



to whom I am indebted. The suprarenals appeared to be rather larger than normal, but microscopically nothing noteworthy was discovered. The ovaries were small and fibrous. One showed the remains of a cyst into which hæmorrhage had occurred; the other contained a small thin-walled cyst. No ova were found. The thyroid presented normal characters. The parathyroids were of normal size and structure.

Certain features of the case are worthy of special remark. The mode of onset with muscular and articular pains is quite in



accord with classical descriptions of the disease. The deformities produced in the hands, as the disease progressed, strongly resembled those of rheumatoid arthritis. Indeed, the case was sent in to hospital as an early rheumatoid condition. Its steadily progressive character under observation was very striking, despite nourishing diet, tonics, and abundant lubrication of the skin. The very remarkable degree of emaciation reached before death is of itself almost unique. The mode of death by inter-current complication is usual, but the exact nature of the pulmonary condition was rendered doubtful by the scarcity of physical signs, the absence of spit, and the scanty degree of febrile reaction. *Post-mortem* records must of necessity be few in this disease, but here it is important to note that no lesion was found to shed any light on the cause of such a marked condition.

The accompanying photographs of the hands and feet illustrate to some extent the skin changes and resultant deformities.

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## ON "CONCENTRATING" AND "CENTRIFUGAL" VIBRATIONS.

BY EDGAR F. CYRIAX, M.D. EDIN., LONDON.

VIBRATIONS are usually divided into two classes, namely, stationary and running. The direction in which the latter are applied is practically always centripetal, and quite rightly so, as in the vast majority of cases the result aimed at is promotion of absorption by the veins and lymphatics. It may, however, under certain circumstances be desirable to achieve the opposite, *i.e.*, to prevent absorption and to drive absorbed matters back towards their point of entrance. In cases of this sort recourse can be had to the so-called concentrating and centrifugal vibrations. These manipulations were elaborated by the late Henrik Kellgren (1837-1916) about the year 1870, and were largely employed by him in the type of case just quoted. The methods have, however, hardly received any recognition, and as far as I know have not been adopted by any but Kellgren's pupils, and no description apart from my own<sup>1</sup> of the methods or clinical results from their employment have appeared in print.

I have described the technique of manual vibrations on so many occasions that I shall in this paper content myself with a brief account of the *modus operandi* of the two special forms under consideration.

1. *Concentrating vibrations.*—Either one or both hands may be employed. In the former, the tips of the fingers are spread out so as to lie around the area it is desired to affect at some little distance from it, as in Fig. 1 (p. 166). The vibrations are then set up, and during their progress the fingers, by means of flexion at the metacarpo-phalangeal joints, and to a less extent at the interphalangeal joints, are gradually approximated around and towards the area in question, the amount of pressure being simultaneously increased (see Fig. 2, p. 167). The fingers having

arrived at the edges of the area, the pressure is relaxed: the fingers are brought back to their original position, and the manipulation repeated. According to circumstances, so may the manipulating digits slide over the surface of the skin or move as one with it. If both hands are employed, the finger-tips are placed respectively on either side of, or above and below, the area in question, as in Figs. 3 and 4 (pp. 168, 169), or right round it, thereby enclosing it. During the progress of the manipulation the fingers of the respective hands gradually approach one another and the reverse. The method is really the same as



FIG. 1.  
Concentrating vibration.

when only one hand is employed: it is simply a question of using more fingers.

2. *Centrifugal vibrations*.—The interphalangeal joints are either extended so that the finger-tips lie on the skin or semi-flexed so that the dorsal aspect of the nails lies on it. In the former case the manipulation is carried out at a slow rate, in the latter at a more rapid one. The fingers having been placed on the spot selected, *i.e.*, the *proximal* end of the area in which septic absorption is progressing, are set into vibration and then run downwards in a *centrifugal* direction.

The effects of the foregoing are as follows:—

1. *Concentrating vibrations*.—As their name implies, they induce local accumulation in the amount of blood or lymph or any toxin or pus that may be present, with extrusion thereof through any outlet that may exist. This is well demonstrated in the case of wounds and ulcers: concentrating vibrations readily cause an exudation of lymph through their walls and floor, and frequently pus is expressed, sometimes from hitherto unsuspected points.<sup>2</sup> Were the manipulation continued longer in these cases it would be possible to induce slight capillary hæmorrhage, but of course in actual practice this is not done.

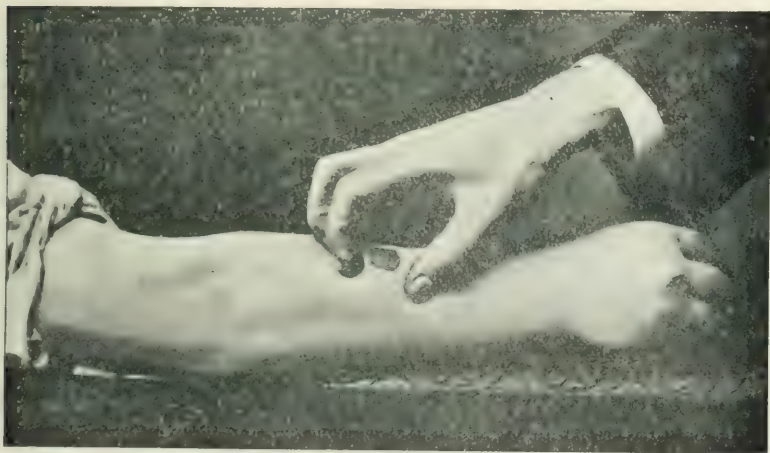


FIG. 2.  
Concentrating vibration.

2. *Centrifugal vibrations*.—The special effect of these is to prevent further absorption of toxins, &c., and to cause a centrifugal movement in those already absorbed. The obvious visible effect of these vibrations in lymphangitis and similar conditions is the extrusion of pus from the original focus of infection if it is still open. It has been suggested to me that it is impossible to obtain a centrifugal movement in lymph vessels because this would be prevented by the valves, and that in consequence what is expressed by centrifugal vibrations is merely the pus at or near the orifice, the remainder higher up being practically left in



*situ quo.* Although under normal circumstances such reflux is actually prevented by the valves, I consider that the latter become incompetent in lymphangitis owing to the dilatation of the vessels, and thus permit of a return movement. It is possible that the manipulation may drive some of the pus and toxins through the actual walls of the lymph vessels into the lymph spaces beyond. This is, however, no disadvantage; in fact, quite the contrary, as in view of the fact that it encounters a comparatively large quantity of fresh lymph (which, incidentally, doubtless has an increased number of white corpuseles), its speedy and complete disintegration is certain.



FIG. 3.

Vibration with simultaneous to and fro movement of the skin.

The indications for the use of the foregoing manipulations, as can be gathered from foregoing paragraph, are the presence of any condition in which it is desired to cause a flow of lymph through cells in which this is impeded or in which it is desired to collect or evacuate pus or toxins. Thus they are indicated in abscesses to promote pointing and to remove pus after opening, in ulcers, wounds, diffuse cellulitis, lymphangitis, &c. I have employed them with success in erysipelas of the leg.<sup>3</sup>

I append herewith notes of my own case of blood poisoning,

in which it will be seen that in spite of the acute symptoms present during 5th to 6th December, the arm was practically normal by 9th December, permitting of my cycling for half-an-hour.

On 24th November, 1916, I was cycling and had a side-slip, in consequence of which a very slight wound resulted on the posterior surface of the first phalanx of the little finger of the right hand. It apparently was healing without any symptoms when on 28th November it commenced to ache and a drop of pus exuded. After this it gave no trouble until 2nd December, when, after playing three strenuous games of hand fives, the original



FIG. 4.

Vibration with simultaneous to and fro movement of the skin.

wound hurt somewhat, and the surrounding tissues began to swell. Thinking this was merely the result of the fives, I paid no particular attention. During the night of 3rd to 4th December, however, the swelling got suddenly worse, and spread over the posterior surface of the fifth metacarpal bone. The whole area commenced to pain and throb, and the hand became stiff. I applied centrifugal vibrations from wrist to wound every three hours, and expressed a drop of pus on each occasion. Morning temperature, 97·2°: evening, 98·2°.

5th December—Condition of hand worse, and I was compelled

to cease using it. Morning temperature,  $98\cdot2^{\circ}$ . During the course of the morning the lymphatic glands at the elbow became involved, and several infected vessels marked by the usual red lines showed themselves in the forearm, which became enlarged. Centrifugal vibrations were applied at two-hourly intervals from elbow to wound: a considerable amount of pus, frequently blood-stained, was thereby extruded. A bacteriological examination of the pus revealed streptococci and query bacillus aerogenes capsulatus. During the evening swelling of the upper arm and involvement of the axillary glands ensued. During the space of one hour rigors took place at intervals. Temperature,  $101\cdot3^{\circ}$ . Hot fomentations were applied at three-hourly intervals to the upper arm during the next two days, after which they were discontinued.

*6th December*—Condition of hand better, though pus still flowing freely from the wound when centrifugal vibrations were applied: but upper arm worse, showing brawny discolouration and considerable swelling, specially on its inner aspect. Morning temperature,  $97\cdot2^{\circ}$ ; evening,  $98\cdot2^{\circ}$ . Treatment the same as yesterday, including centrifugal vibrations and gentle petrissage, applied in order to soften the tissues on the upper arm.

*7th December*—Throbbing in the axilla for two hours during the morning; condition of both hand and forearm improving: lymphangitis not so marked. Considerably less pus from the wound. Morning temperature,  $98\cdot6^{\circ}$ ; evening,  $99\cdot0^{\circ}$ .

*8th December*—Marked improvement: no signs of inflamed vessels in the forearm, and redness and swelling in upper arm almost disappeared: hardly any pain. Only one drop of pus could be expressed from the wound in the morning, and the same amount in the evening. Temperature—Morning,  $97\cdot2^{\circ}$ ; evening,  $98\cdot6^{\circ}$ . An attempt to ride a bicycle during the morning had to be abandoned after 200 yards owing to pain arising in the hand. Fomentations discontinued; centrifugal vibrations twice daily from to-day until 11th December, after which they were also discontinued.

*9th December*—Arm practically normal: one drop of pus morning and evening, after which it ceased. During the morning I cycled for half an hour without the slightest inconvenience. Temperature—Morning,  $97\cdot3^{\circ}$ ; evening,  $98\cdot6^{\circ}$ .

10th December—Arm normal. Cycled ten miles during the morning and worked for two and a half hours at mechanotherapeutics during the afternoon without the slightest symptoms.

11th December—Desquamation commenced over the little finger and adjacent area: it lasted about three weeks.

28th December—No symptoms whatever after five games of hand fives. No sequelæ.

In conclusion, I should mention that the only solution applied to the wound was boiled water.

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#### REFERENCES.

- <sup>1</sup> *The Elements of Kellygren's Manual Treatment*, 1903; *New York Med. Jour.*, 1911, vol. xciii, 978-983; *Med. Press and Circ.*, 1915, N.S., vol. xcix, 291-294; *Jour. Scient. Phys. Train.*, 1917, vol. ix, 41-44, 53-56.
  - <sup>2</sup> The author in *December Practitioner*, 1918, c., 491-502.
  - <sup>3</sup> *The Elements of Kellygren's Manual Treatment*, 1903, p. 293.
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## Obituary.

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THE LATE PROFESSOR ALEXANDER R. FERGUSON,  
CAIRO.

THE death of Alexander R. Ferguson, which occurred at Cairo, on 11th February, from illness contracted upon service, deprives the University of a distinguished son, who had rendered her good service before his promotion to the Chair of Pathology in Cairo.

He graduated "with high commendation" in 1892, and spent several years in resident appointments in the Western Infirmary, Woodilee Asylum, and the City Fever Hospitals before devoting himself to the special study of pathology, an experience which afforded him a wide outlook upon disease in general, and gave particular value to his opinion upon purely pathological questions. In 1895 he became assistant to the late Professor Coats, and subsequently to Professor Muir, holding at the same time the posts of Assistant Pathologist to the Western Infirmary and Pathologist to the Royal Hospital for Sick Children. In 1902 he took the degree of M.D. "with honours," being awarded a Bellahouston Gold Medal for his thesis. In 1905 he was appointed to the Chair of Pathology in the School of Medicine in Cairo, which he occupied at the time of his death.

To the students of medicine in Glasgow University Dr. Ferguson was for many years a well-known and attractive teacher. Possessed of a wide knowledge of his subject and its practical bearings, and gifted with the faculty of interesting exposition, he had a stimulating influence on his students, and inspired many with his own enthusiasm. At Cairo his teaching met with like success, whilst his sympathetic nature and interest in his students' welfare won their confidence to an ever-increasing extent. And there is no doubt that the marked influence which he had come to exert on medical education in

Egypt would, but for his untimely illness and death, have been still further extended.

Dr. Ferguson was accomplished alike as a pathologist and a bacteriologist, and few men had so extensive and varied a knowledge. In proportion to the amount of investigation which he did, his published papers are not numerous, the most important being on the blood changes and lesions in small-pox, and on bilharziosis. His work was characterised by accurate observation and sound judgment, whilst his writing always possessed literary charm. To his special pathological knowledge were added the results of clinical experience, and his opinion on individual cases was much valued by physicians and surgeons. His services in this direction were given unsparingly.

His position in Egypt at the outbreak of war naturally marked him for a high post, and he was appointed Consulting Pathologist to the troops. Here his responsibilities were great, for Egypt is the clearing-house between the East and the West, and was exposed, during the war, to almost every infectious disease that is known, while the local conditions are peculiar and require special treatment to prevent the spread of disease. The fact that none of the invading infections gained the mastery was due in large measure to his untiring efforts and his special knowledge.

Various causes combined to make his work heavy. At first located in a railway car, he moved from place to place as circumstances dictated. And though later on he was able to make his headquarters in Egypt, he was often summoned to Sinai and Palestine where his work had to be done at great pressure and under conditions of considerable difficulty, in huts or tents, and often on sand. In the autumn of 1917 he showed the effects of strain and was urged to rest, but he would not give up his work; and these recurred in the spring, after he had successfully suppressed an outbreak of cholera among the Egyptian Labour Corps. In the autumn of 1918, when the war was ended, his health finally broke down, and he was compelled to give up his work. During the summer months following he was at home and made considerable improvement, but his symptoms became aggravated on his return to Cairo, and he was never able to resume his duties.

Few are privileged to win the affection and esteem of their fellows to such a degree as Ferguson did. He was a man of straightforward simplicity of character and of unusual charm; modest, gentle, and courteous, he was at the same time immovable in resolve when he considered a principle of right concerned. And while he applied severe standards to his own conduct, he was always indulgent towards the failings of others. He had a keen interest in, and great enjoyment of, life in its many aspects, a rich fund of anecdote, and a marked trait of quaint humour; all these enhanced the pleasure of intercourse with him. But above all, it was his bigness of heart and sincerity of life which gave him the place which he held with his compeers. His memory will always be cherished by those who had the advantage of his friendship.

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CHARLES WORKMAN, M.D., M.Ch., R.U.I., F.R.F.P.S.G.

WITH much regret we record the death on 8th March of Dr. Charles Workman. He died after a short illness at his residence, 5 Woodside Terrace, Glasgow, in his sixty-eighth year.

Dr. Workman was a native of Belfast, and was educated at the Royal Academical Institution and at Queen's College in that city. He graduated M.D. there in 1877, and thereafter continued his studies at Guy's Hospital, London, and at Berlin and Munich. After gaining experience in several residential hospital appointments in Ireland, he came to Glasgow about 1885. Soon thereafter he joined the staff of the Glasgow Royal Infirmary and St. Mungo's College, and did good work on the medical side at the Dispensary, and as Assistant Pathologist and Assistant to the Professor of Pathology. In 1895 he succeeded his chief, the late Dr. J. Lindsay Steven, as Professor of Pathology at St. Mungo's College, and Pathologist to the Infirmary. In these positions Dr. Workman worked well and faithfully until 1908, when he retired. It should be added that for several years he was University Lecturer in Pathology in Queen Margaret's College. During his time as a teacher of pathology he held various examinerships in that subject, viz., to the University of

Glasgow, the Royal Faculty of Physicians and Surgeons, Glasgow, and to the Conjoint Board. Dr. Workman was a staunch United Free Churchman, and was for many years an elder in Woodlands Church, and a well-known member of Glasgow Presbytery, in whose deliberations he took a very active part. He also rendered excellent service on several of the General Assembly Committees.

Dr. Workman is survived by his widow, one son, and three daughters. A younger son was killed in the early part of the war while on active service.

. . . . .

We have received the following appreciation of Dr. Workman from one of his former colleagues:—

“Workman was an able and well-trained pathologist, and knew the microscope well. Photography was one of his recreations. He was a most agreeable colleague, and would readily leave an investigation on which he was engaged to advise or help a fellow-worker. It is perhaps unfortunate that he did not publish more of his work, but he was apparently quite free from the incentive of personal ambition, and his duties as a teacher and examiner, with but scanty official assistance, must have occupied a great part of his time and attention. For the delights of private research, he would resort in the vacation to the Marine Biological Station at Millport.

“Workman was upright and honourable, and was not the man to cherish malice against anyone. After he retired from active work as a pathologist he gave much time to work for the Church. His extensive knowledge of political, social, and scientific matters made him an interesting companion. His home life was very happy, though clouded early in the war by the death of his younger son while on active service. A good man and true has been lost to the profession through the death of Charles Workman.”

T. K. M.

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JOHN MORTON, M.B., C.M. GLASG.  
GLASGOW.

WE regret to announce the death of Dr. John Morton, which took place with some suddenness in a nursing home on 21st March, 1920. We understand that Dr. Morton, who was one of the Visiting Surgeons to the Western Infirmary, had been in indifferent health for some months, and that a severe operation was found to be necessary. He succumbed, however, three days later. We hope to publish an adequate notice of his life and work in our next issue.

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PETER SKINNER CLARK, D.S.O., B.Sc., M.B., D.P.H.  
CAPE COLONY.

WE regret to announce the sudden death of Mr. P. S. Clark, which took place recently in London. He was the second son of the late Bailie Clark, Auchtermuchty, and of Mrs. Clark, Crancil House, Montrose. He studied medicine at Glasgow University, where he had a distinguished career, taking the degrees of B.Sc. and M.B., C.M., the former in 1890, and the latter, with commendation, in 1900. Thereafter he served in the Boer War, and on being invalided home he started practice in Slamannan. Soon afterwards he again emigrated, and for fourteen years was in practice in Craddock, Cape Colony. In recognition of his medical skill and meritorious service during four years in the German East and West African theatres of war he rose to the rank of Brigadier-General, and received the D.S.O.

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## CURRENT TOPICS.

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**DISABLED MEN: JOINT INSTITUTIONAL COMMITTEE FOR SCOTLAND UNDER THE MINISTRY OF PENSIONS.**—This powerful and representative Committee has been in existence since June, 1917, and from the wide powers and functions which have been assigned to it, it is well that its existence should be more widely known, so that it may most advantageously be employed. It has been empowered to provide necessary institutions for the medical and surgical treatment of discharged or demobilised officers, sailors, soldiers, and airmen suffering from diseases or conditions consequent upon war service, institutions for convalescent treatment, and also for orthopædic treatment and combined treatment and training. Further, it has power to provide hospital equipment and comforts for all disabled men who may be undergoing such treatment. It surveys, administers, and generally supervises the disposal and allocation of all public funds raised for these purposes and placed at its disposal. It also may co-operate with any voluntary or other body which may have such funds available, and advise and assist in the administration of these funds to the best advantage. In addition, further functions may at any time be assigned to it by the Minister of Pensions. The Committee meets in Edinburgh once every three months. The Glasgow representatives on the Committee are Sir George Beatson, who is Vice-Chairman, and Sir Charles Cleland. The present Secretary of the Committee is Mr. H. A. Reid, 121 West George Street, Glasgow. It is desirable to allow of proper co-ordination, that this Committee should be consulted with regard to proposals for the provision of institutions for the treatment of disabled men, or funds to assist in such treatment, whether they be earmarked for use in a specified area or for general purposes.

**THE MACKENZIE DAVIDSON MEMORIAL FUND.**—The death of Sir James Mackenzie Davidson has deprived radiology of one of its most distinguished workers. His name is associated

generally with the development and improvement of radiographic technique, and particularly with that of stereoscopic radiography, and with measurement and localisation of foreign bodies. To the perfection of these methods many thousands of wounded men have great cause for gratitude. His reputation was an international one, and to perpetuate his memory it has been proposed to raise funds wherewith to found a Mackenzie Davidson Chair of Radiology at some University. An appeal has just been issued in the public press over the names of men distinguished in medicine, politics, and other walks of life, for funds for this purpose, and it should meet with general support. It is rightly pointed out and emphasised that developments in radiology are of the highest importance in many manufacturing industries as well as in medicine. For these reasons a very generous response to the appeal is solicited both from the general and the medical public.

HEALTH INSURANCE.—Changes are proposed under the new National Insurance Bill, which was introduced in the House of Commons on 1st March by Dr. Addison. The Bill has for its main object the provision of an increase in the rates of benefits, in view of the altered value of money. It increases the normal rate of sickness benefit in the case of men from 10s. to 15s. per week, and in the case of women from 7s. 6d. to 12s. per week, the rate of disablement benefit from 5s. to 7s. 6d. a week for both sexes, and the amount of maternity benefit from 30s. to 40s. The Bill retains the fundamental principle of the National Insurance Act of 1911, under which the cost of benefits is met by compulsory weekly contributions from workers and their employers, together with a specified proportional grant from the Exchequer. To provide for the increased benefits the joint weekly contribution is to be increased by 3d., of which 2d. is to be borne by the employer and 1d. by the worker. The proportional contribution from the State is to be two-ninths in the case of men as at present, and two-ninths (instead of one-fourth as at present) in the case of women, with an additional contribution from the Exchequer towards the cost of women's benefits in the form of an increase in the present women's equalisation fund. The Bill provides for an increased contribution from insurance funds towards the cost of medical services, and fixes the total

charge on those funds at 9s. 6d. per insured person per annum for medical benefit, including drugs as well as attendance, and for this purpose a special grant will be provided out of public funds. Sanatorium treatment is no longer to be provided under the scheme of National Health Insurance except in Ireland.

Since the Bill was introduced, the question of the rate for medical attendance was referred to arbitration, as the result of representations on the part of the medical profession of the inadequacy of the proposed rate. The arbiters have decided that 11s. per insured person per annum for medical attendance should be provided.

THE GLASGOW ROYAL INFIRMARY CLUB DINNER.—A representative gathering of the members of this club met in Burlington House, Bath Street, on Friday evening, 12th March, under the genial chairmanship of Dr. James A. Adams. Amongst those present were Dr. Freeland Fergus, President of the Royal Faculty of Physicians and Surgeons, Dr. John Barlow, Dr. W. R. Sewell, Dr. J. Kerr Love, and Dr. D. McKellar Dewar, one of the representatives of the Corporation on the Infirmary Board of Management. The meeting was noteworthy as being the first since 1914. After an enjoyable meal, the members addressed themselves to business. Dr. John Barlow was appointed chairman for next year, and Drs. W. A. Sewell and O. H. Mavor were appointed secretaries in room of Drs. John Patrick and James Scott, who were cordially thanked for past services. A paper knife, used by Lord Lister and bearing his initials, was presented to the club by Mrs. Aikman, widow of the late Dr. John Aikman of Guernsey, who was a former chairman of the club and for many years a faithful member. A presentation to the club was made also by Dr. A. N. McGregor. This consisted of a handsome box containing a neatly mounted and inscribed mallet. The box and mallet were made from old oak taken from the Bishop's Well. These donors were duly thanked for their interesting and handsome gifts to the club.

Thereafter a short toast list was proceeded with. Dr. Adams, in giving the toast of the "Glasgow Royal Infirmary," struck a strong historical note which was well sustained by succeeding speakers. A list of the names of members who gave their lives during the war was read by the Chairman, and this "In



Memoriam" toast was duly honoured by the members. The list comprises eleven names:—

WILLIAM EBENEZER MAITLAND, Lieutenant, Seaforth Highlanders.

Killed in action, 24th December, 1914.

HUGH COCHRANE STORRIE, Captain, R.A.M.C.

Killed in action, 12th September, 1915.

ROBERT INGLIS BINNING, Captain, I.M.S.

Died of fever, Basrah, 16th August, 1916.

THOMAS ERROL GUTHRIE, Captain, N.Z.M.C.

Killed in action, 3rd July, 1916.

JAMES ELLIOT BLACK, Captain, R.A.M.C.

Killed in action, 19th April, 1917.

JAMES EWING, Captain, R.A.M.C.

Died of wounds, May, 1917.

ROBERT DUNLOP BLACK FREW, Captain, R.A.M.C.

Killed in action, 3rd August, 1917.

JOHN HART M'NICOL, M.C., Major, R.A.M.C.

Died of pneumonia, Macedonia, 10th August, 1918.

WILLIAM B. JACK, Captain, R.A.M.C.

Died of wounds, September, 1918.

JAMES TOWERS KIRKLAND, M.C., Captain, R.A.M.C.

Killed in action, 18th September, 1918.

DANIEL STEWART, Captain, R.A.M.C.

Died after invaliding home from Egypt, 11th November, 1918.

An interesting and varied programme was carried through in the course of the evening. A special word of thanks is due to Dr. O. H. Mavor for the clever caricatures with which the menu card was embellished.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—  
At the last meeting of the Faculty the following were admitted to the Fellowship after examination:—Andrew Allison, M.B., Ch.B., D.P.H., B.Sc., St. Vincent Park, Ibrox; Thos. Blackadder Gilchrist, M.D., D.P.H., Johannesburg; John Clark Middleton, M.B., Ch.B., B.Sc., 778 Crow Road, Glasgow; Robert Cecil Robertson, M.B., Ch.B., M.R.C.P.Ed., D.P.H., Royal Army Medical College, London. At the same meeting Dr. Thos. Forrest, Glasgow, presented to the Royal Faculty a case of surgical instruments which had been the property of, and were used by,

the late Lord Lister while he was a surgeon in the Glasgow Royal Infirmary. The gift was accepted on behalf of the Fellows by the President, Dr. Freeland Fergus, who stated that it would be placed in the archives of the Faculty.

THE REGIUS CHAIR OF MEDICINE AT OXFORD.—The appointment is announced of Sir Archibald E. Garrod, K.C.M.G., M.D., F.R.S., to this chair, in room of the late Sir William Osler. Sir Archibald Garrod is one of the Examiners in Medicine in the University of Glasgow.

ROYAL SOCIETY.—Among those recommended by the Council of this Society for election as Fellows is Dr. E. P. Cathcart, Professor of Physiological Chemistry in the University of Glasgow.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At an extraordinary meeting of this College held recently, it was resolved to admit women to the Fellowship after examination on the same conditions and with the same privileges as men. In this connection it is of interest to note that the Fellowship of the Royal Faculty of Physicians and Surgeons, Glasgow, was opened to women several years ago, but so far only one has sought examination and has been duly admitted.

COMMITTEE OF MEDICAL MEMBERS OF THE HOUSE OF COMMONS.—It is announced that Captain W. E. Elliot, M.C., has succeeded Dr. A. C. Farquharson as Secretary of this Committee. Captain Elliot is a graduate of Glasgow University, and was a Resident in the Glasgow Royal Infirmary.

SCOTTISH BOARD OF HEALTH: CONSULTATIVE COUNCILS.—It will be remembered that the Scottish Board of Health was empowered to set up Consultative Councils to advise and assist in the work of the Board. Four such Councils have been established—(1) Medical and Allied Services, (2) National Health Insurance (Approved Societies' Work), (3) Local Health Administration and General Health Questions, (4) Highlands and Islands. The Council which is of most immediate interest to the medical profession is the first of these. Its

personnel has been published by a contemporary, and it numbers twenty in all, representative of the various areas in Scotland. Glasgow is represented by Sir Donald MacAlister, Professor John Glaister, and Dr. A. K. Chalmers. It may be noted also that Dr. J. R. Drever, Scottish Medical Secretary of the British Medical Association, and until recently a well-known practitioner on the South Side of Glasgow, is a member.

LITERARY INTELLIGENCE.—Messrs. Masson et Cie, medical publishers, of 120 Boulevard Saint-Germain, Paris, announce the addition of two new works to their "Collection" of handbooks on special subjects for the use of general practitioners, viz., *Examen de Laboratoire du Médecin praticien*, by Dr. Guy-Laroche, with a preface by Professor Chauffard. The book is a volume of 412 pages, with 117 illustrations and one coloured plate, its price is 15 francs net; also *Oto-Rhino-Laryngologie du médecin praticien*, by Dr. Georges Laurens, a book of 468 pages, with 593 original illustrations, price 15 francs net. Both of these books, the publishers claim, will be of service to the general practitioner in giving him a working insight into the special subjects with which they deal, and in helping him to select the cases which should ultimately be passed on to the specialist.

Messrs. Masson et Cie also announce the publication of the following new medical works, viz. :—

*Les Lésions des nerfs: Traitement et Restauration*, par Mme. Athanassio-Benistry, ancien interne des hôpitaux de Paris (Salpêtrière), 1 vol. de 158 pages et 66 figures. (7 fr. net.)

*Petite Chirurgie Pratique*, par Th. Tuffier, Professeur agrégé à la Faculté de Médecine, Chirurgien de l'Hôpital de la Pitié, et P. Desfosses, Chirurgien de l'Hôpital Britannique à Paris. Cinquième édition. Un vol. in-8 de 714 pages, avec 419 figures. (20 fr. net.)

*Grandes et Petites Obésités*, par le Dr. F. Heckel. 1 volume de 536 pages, avec 70 figures formant 12 planches hors-texte, 2 édition entièrement refondue et complétée. (15 fr. net.)

*Précis d'Anatomie et de Dissection*, par H. Rouvière, Professeur agrégé, chef des travaux anatomiques à la Faculté de Médecine. Préface du Pr. A. Nicolas. 2 volumes in-8 (de la Collection de Précis médicaux). Tome II: Thorax, Abdomen,

Bassin, Membre inférieur. 2<sup>e</sup> Edition. 1 vol. in-8 de 478 pages, avec 259 fig. en noir et en couleurs. (Broché, 15 fr. net : Cartonné toile, 17 fr. net.)

*Précis de Médecine des enfants*, par le Dr. P. Nobécourt, Professeur agrégé à la Faculté de Médecine de Paris, Médecin des hôpitaux, Troisième Edition refondue. 1 vol. in-8 (de la collection de Précis médicaux), de 992 pages avec 184 figures dans le texte et 2 planches hors texte. (Broché, 22 fr. net : Cartonné toile, 25 fr. net.)

*Précis de Biochimie*, par E. Lambling, Professeur à la Faculté de Médecine de l'Université de Lille. 2<sup>e</sup> Edition revue et augmentée. 1 vol. in-8 de xxvi-708 pages (Collection de Précis médicaux. Broche, 15 fr. net : Cartonné, 17 fr. 50 net.)

*La Pratique du Pneumothorax thérapeutique*, par F. Dumarest, médecin en chef, et C. Murard, médecin adjoint du Sanatorium d'Hauteville. Un vol. de 264 pages. 22 fig. et 8 planches hors texte. (12 fr. net.)

*Toxines et Antitoxines*, par M. Nicolle, E. Césari, C. Jouan, de l'Institut Pasteur de Paris. Un volume de 124 pages. (5 fr. net.)

*Leçons de Pathologie digestive, 4<sup>e</sup> Série*, par M. Loeper, Professeur agrégé à la Faculté de Médecine de Paris, médecin de l'Hôpital Tenon. (11 fr. net.)

*La Méningite tuberculeuse de l'Enfant*, par le Dr. A. Lesage, médecin des hôpitaux de Paris, membre du Comité supérieur de protection des enfants du 1<sup>er</sup> âge. Un vol. (5 fr. net.)

*Cavernes pulmonaires et Phénomènes caverneux*, par le Dr. Ch. Sabourin, Directeur du Sanatorium de Durtol. Un volume de 147 pages. (3 fr. 30 net.)

*La Rachianesthésie générale*, par le Pr. Th. Jonnesco, membre correspondant de l'Académie de Médecine de Paris, ancien recteur de l'Université de Bucarest. Un vol. de 128 pages. (4 fr. net.)

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## MEETINGS OF SOCIETIES.

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### THE ROYAL MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

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SESSION 1919-1920.

MEETING III.—23RD JANUARY, 1920.

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*The Vice-President, MR. A. A. YOUNG, in the Chair.*

#### I.—THE REPAIR, BY BONE GRAFT, OF GAPS IN THE SKULL DUE TO CONGENITAL DEFICIENCY, INJURY, OR OPERATION.

BY MR. ALEX. MACLENNAN.

Mr. MacLennan's communication will be published as an original article in a future issue of the *Journal*.

#### II.—DEMONSTRATION OF PATIENT OPERATED ON BY LISTER IN 1870.

BY MR. JOHN PATRICK.

Mr. John Patrick showed a patient the whole of whose right hand except the thumb had been amputated by Lister in 1870.

The patient remembered that Annandale assisted, and that the spray was employed in the first and some subsequent dressings. The man had worked all his life as a letterpress printer, and had very frequently required to lift formes of type weighing up to two hundredweight, which he was able to do by hooking the thumb under the edge of the forme. The thumb was maintained generally in a position of semi-flexion, additional flexion being easily obtained, but there was no power of

extension. The thumb had gradually rotated till now it occupied almost a mid-palmar position; in that position it appeared to possess more powerful leverage than if it had remained in the radial line. The interest in the case was both historical and economic. Even an unopposed thumb was to this man much more useful than the most intricate mechanism with all the devices of the artificial limb maker.

III.—SOME SURGICAL CONDITIONS OBSERVED IN THE SALONIKA ARMY, WITH SPECIAL REFERENCE TO PERINEPHRIC ABSCESS AND THREE EXAMPLES OF ANAPHYLAXIS.

BY MR. JOHN PATRICK.

This communication will appear as an original article in a future number of the *Journal*.

IV.—SOME POINTS ON THE RELATIONSHIP BETWEEN A POSITIVE WASSERMANN REACTION, AND INFECTIVITY, IN CASES OF SYPHILIS.

BY PROFESSOR CARL H. BROWNING.

This communication will be published as an original article in a future issue of the *Journal*.

V. Dr. TANIGUCHI gave a demonstration of cultures of *spirochæta icterohæmorrhagiæ*.

VI.—PAPILLOMA OF THE POSTERIOR WALL OF THE STOMACH REMOVED BY TRANSGASTRIC OPERATION.

BY MR. WILLIAM RANKIN.

The patient, R. C., æt. 57 years, was admitted to the Broadstone Jubilee Hospital, Port-Glasgow, in May, 1919, suffering from epigastric discomfort of four months' duration. She had great disinclination for any kind of food, was becoming increasingly weaker and more anæmic, and on examination admitted to pain in the left hypochondriac region. She had no vomiting. Nothing was palpated even under an anæsthetic.

She passed several offensive stools containing blood and mucus,

and an exploratory examination was carried out in the expectation of finding a tumour of the splenic flexure of the colon.

*Operation* (10th June, 1919).—An examination of the large intestine failed to locate any tumour, but, when the stomach was examined, a mass was felt inside it about the size of a golf ball, and it was clear that it was situated on the posterior wall about midway between the two curvatures.

Transgastric excision was then carried out without difficulty, and the patient made an easy and quiet recovery.

She was seen on 20th January, 1920, and found to be quite restored to good health. She is working daily as a weaver, has a good colour, has put on weight, and is able to take any kind of food without discomfort.

The case seemed to me one of sufficient rarity to report, and the specimen worth exhibiting to the Society.

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## REVIEWS.

*Cerebro-Spinal Fever.* By C. WORSTER-DROUGHT, B.A., M.B.,  
and ALEX. MILLS KENNEDY, M.D. London: A. & C. Black,  
Limited. 1919. (30s. net.)

A COMPACT volume on cerebro-spinal fever has long been wanted, and this new book by Drs. Worster-Drought and Kennedy, a record of painstaking work, admirably supplies the need. The observations recorded were made, for the most part, during the war on troops in the Woolwich military district. The cases which came under notice have been thoroughly investigated, and the methods employed are described in full detail—in particular, those connected with the examination of the cerebro-spinal fluid. The diagnosis of meningitis nowadays is a matter largely determined by examination of the fluid, and even the clinical signs are reckoned of less weight. The number of tests which can be carried out with cerebro-spinal fluid is gradually increasing, and it is convenient to have them set down together, even though some are of minor value. The finding of pus cells and of the infecting organism, whether meningococcus or another, remain the important facts. There is a full description of the symptomatology and of the points on which diagnosis is founded. The authors enumerate as the chief clinical features of the disease—sudden onset, with rigors, increasing headache, and vomiting; cervical muscular rigidity; Kernig's sign; and, in infants, tension and bulging of the anterior fontanelle.

The section on treatment is very well done, and leaves no doubt as to the exact methods employed. It is a disease which demands much time and patience. In even the mildest cases it is advised that serum be given intrathecally on at least four successive days. When lumbar puncture is performed for injection of serum, as much fluid as will run out through the needle should be allowed to escape, and the puncture should be repeated daily until the fluid is found to be clear. The authors prefer to put the serum into the spinal canal by the action of



gravity, through a filler and tube at low pressure, rather than to inject it from a syringe. By this means a constant slight pressure is maintained and not exceeded, and the danger of serious fall of blood-pressure is avoided. The question of the recognition and treatment of carriers of the disease is considered, but it is often difficult to eradicate the meningococcus from the naso-pharynx.

Throughout the book there is ample reference to the writings of other workers, and a full bibliography is given. We regret that there is no mention of Connal's long and valuable article on the study of cerebro-spinal fluid in meningitis. Connal's work was carried out in Belvidere Hospital, and his results were published in 1910.

The book is of convenient size, and is printed on light paper. On p. 160, l. 24, there is a misprint of "2nd" for "12th" thoracic vertebra.

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*Surgical Nursing and After-Treatment.* By H. C. RUTHERFORD DARLING, M.D., M.S.Lond., F.R.C.S.Eng., F.R.F.P.S.Glasg. London: J. & A. Churchill. 1917. (8s. 6d. net.)

*Surgical Nursing and After-Treatment* has been written to meet the requirements of the Australian Trained Nurses' Association. Mr. Darling has produced a well finished book on certain aspects of surgery, which must have cost him infinite labour. Throughout we have not a fault to find with the intrinsic qualities of the material.

At the same time we feel bound to protest against the scope of this work as a book to be placed in the hands of nurses. We are aware that in this matter the author is at the mercy of the Australian Association; but we suspect that his opinion as to the attainments demanded of nurses does not materially differ from that of the controlling body.

In justifying his book he says—"The best nurse is necessarily one who combines theory and practice." That, as a generalisation, is unassailable. We must, however, go further and claim, as the ideal set of conditions, a working minimum of theory and a working maximum of practice. We believe it to be no less than ridiculous to expect, from nurses, a knowledge of the

morbid physiology of immunity, of the sub-divisions of bacilli, or of other subjects of which but few practising surgeons are prepared, on short notice, to give a satisfactory account.

On the other hand, the author hopes that his book may be of use to medical students and dressers as well as to junior members of the medical profession. With this hope we are in complete accord, and to students and practitioners we cordially recommend Mr. Darling's work, but we cannot, in fairness, recommend it to nurses in the British Isles.

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*Anæsthesia and the Nurse's Duties.* By A. DE PRENDERVILLE, LL.B., M.R.C.S. London: William Heinemann, Limited. (3s. 6d. net.)

As a result of war experience, when so much valuable work was performed by sisters in the administration of anæsthetics, the whole question of the status of nurses with regard to anæsthetic administration has been given considerable prominence of late. Mr. de Prenderville's little handbook makes no pretence of dealing with this wider aspect of the question. It is quite frankly limited to giving "a knowledge of practical anæsthesia that stops short of actual administration," and within those limits it is exceedingly good. The advice given is sound and practical. The author apologises for emphasising elementary and self-evident points, but those are just the points which are so often overlooked, *e.g.*, the warmth of the patient during transit from the theatre to bed. Ether has been blamed for many a bronchitis where the cause has been, partially at anyrate, careless exposure of the patient at this time.

His advice that the administration of the pre-anæsthetic purgative should be two nights before operation, and not on the night immediately preceding, as is the common practice, is good.

If one might offer any criticism of the book, it would be on the score of discursiveness. The historical sketch at the beginning, and some of the matter relating to more complicated methods of anæsthesia towards the end, might, without disadvantage, have been missed out of a work of this kind.

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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EDITED BY GEORGE MACINTYRE.

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### SURGERY.

**Inguinal and Femoral Hernia.** By G. P. La Roque (*Surgery, Gynecology, and Obstetrics*, November, 1919).—The author's method is offered to supplement, not to supplant, the standard procedures already employed. In inguinal hernia the usual incision is made, and the canal opened. The internal oblique and transversalis muscles are split about an inch above their lower margin, and through this opening the peritoneum is picked up and incised. The neck of the sac is thus exposed from within the peritoneal cavity. The index finger is inserted into the hernial sac from above, and adherent structures are then easily peeled from the sac. The bladder, vas, and other structures are constantly in view, and thus adequately protected from injury. The sac is now turned inside out into the peritoneal cavity and through the primary incision. The sac and redundant peritoneum are pulled well upwards, then sutures are placed in the peritoneum above the neck of the sac and to the upper edge of the original incision in the peritoneum. The sac and redundant peritoneum are then amputated, and the opening in the abdominal muscles closed. The inguinal canal may then be treated according to standard procedures.

A suitable modification is used for femoral hernia.—CHARLES BENNETT.

**Internal Piles.** By W. E. Miles (*Surgery, Gynecology, and Obstetrics*, November, 1919).—The old classification of internal piles into arterial, capillary, and venous suggests a distinction which does not exist. A better classification is based upon stages of development—primary, intermediate and final. In the primary stage the pile is small, and covered with healthy mucosa. It cannot be protruded, but may reach to the sphincteric zone and be gripped. Since the mucosa is delicate, hæmorrhage is frequent and profuse. A pile in the intermediate stage is covered with thickened mucosa, does not readily bleed, is protruded during defæcation, but is spontaneously reducible. In the final stage a pile rarely bleeds. Protrusion is continuous and requires manual reduction. On slight exertion protrusion recurs. Any patient may show piles representing all three stages.

When every possible pile has developed in a patient, there are usually seven, in rare cases eight. The position of these corresponds to the distribution of branches of the superior hæmorrhoidal artery.

The author prepares his patients for two days before operation. Confinement

to bed, light diet, purgation, and abstinence from tobacco and alcohol are the chief points in the pre-operative treatment. He favours a ligature operation. On the fourth day after operation a purgative is administered, and the patient is allowed up on the fifteenth.—CHARLES BENNETT.

**Gall-Bladder and Common Duct Surgery.** By H. M. Richter (*Surgery, Gynecology, and Obstetrics*, November, 1919).—In removing the gall-bladder it is often found that the cystic duct is not easily isolated with the gall-bladder undisturbed. Some writers have for this reason advised the preliminary emptying of the gall-bladder. If, however, that organ is separated from its attachment to the liver, when overdistended, it will spring forwards and thus bring the cystic duct within easy reach. This separation is accomplished by incising the peritoneum where it is reflected from the liver on to the gall-bladder, and then sweeping the finger through the attachment. It has been contended that this procedure causes hæmorrhage which obscures the cystic duct, but the delay to clear the way is only momentary. The cystic duct and vessels should be isolated before being clamped. It is not necessary to clamp close up to the common duct. A small portion of cystic duct will do no harm if left. On the other hand, no part of the apex of the gall-bladder should remain. The peritoneal flaps left hanging from the liver, after enucleation of the gall-bladder, should be merely pressed against the raw liver surface, not sutured. If hæmorrhage from the raw surface is persistent, a hæmostatic preparation should be applied. In exceptional cases packing will be necessary to control hæmorrhage, otherwise the abdomen should be closed without drainage. Bile leakage from the liver surface may produce an otherwise unaccountable post-operative reaction.

After operations on the common duct, it is illogical to drain the abdomen unless an obstructive lesion has been left behind.

Several authors have asserted that the incised common duct should not be sutured immediately, but that a tube should be left in the duct for ten or twelve days. Further, it is a common practice to drain even when the duct has been sutured, lest the sutures should give way. It is no more reasonable so to act than it would be to establish drainage in the region of sutured stomach or intestine.—CHARLES BENNETT.

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### *Books, Pamphlets, &c., Received.*

- Wise Parenthood: A Practical Sequel to "Married Love." A Book for Married People, by Marie Carmichael Stopes. Fifth edition. London: G. N. Putman's Sons, Limited. 1919. (3s. 6d. net.)
- Field Ambulance Organization and Administration, by Lt.-Colonel James Hardie Neil, N.Z.M.C. With diagrams. London: H. K. Lewis & Co., Limited. 1919. (4s. 6d. net.)
- The Venereal Problem: A Description of the Venereal Diseases, their History, &c., by E. T. Burke, D.S.O., M.B., Ch.B.(Glas.) With six illustrations. London: Henry Kimpton. 1919. (7s. 6d. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDED 27TH MARCH, 1920.**

	WEEK ENDING				
	Feb. 23.	Mar. 6.	Mar. 13.	Mar. 20.	Mar. 27.
Mean temperature, . . .	42·8°	46·1°	38·7°	43·0°	44·5°
Amount of rainfall, . . ins.	0·15	1·32	0·24	0·53	1·54
Deaths (corrected), . . .	316	337	317	407	414
Death-rates, . . . . .	14·8	15·8	14·9	19·1	19·4
Zymotic death-rates, . . .	0·5	0·9	0·7	1·0	0·8
Pulmonary death-rates, . .	3·7	3·9	4·4	5·7	5·9
DEATHS—					
Under 1 year, . . . . .	68	73	55	62	71
60 years and upwards, . .	91	94	71	116	109
DEATHS FROM—					
Small-pox, . . . . .	...	...	1	...	...
Measles, . . . . .	3	5	7	9	12
Scarlet fever, . . . . .	...	3	1	2	...
Diphtheria, . . . . .	5	5	4	4	1
Whooping-cough, . . . .	2	5	2	5	2
Enteric fever, . . . . .	...	...	...	2	1
Cerebro-spinal fever, . . .	1	3	...	1	3
Diarrhoea (under 2 years of age),	5	5	4	5	5
Bronchitis, pneumonia, and pleurisy, . . . . .	72	75	74	113	118
CASES REPORTED—					
Small-pox, . . . . .	...	3	...	3	2
Cerebro-spinal meningitis, .	3	5	1	8	6
Diphtheria and membranous croup, . . . . .	48	48	46	45	57
Erysipelas, . . . . .	20	23	23	22	27
Scarlet fever, . . . . .	81	99	72	70	71
Typhus fever, . . . . .	...	...	...	...	...
Enteric fever, . . . . .	2	7	5	9	3
Phthisis, . . . . .	52	42	56	60	59
Puerperal fever, . . . . .	3	8	5	5	8
Measles,* . . . . .	477	460	616	706	751
Ophthalmia neonatorum, . .	21	19	16	17	29

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

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No. V. MAY, 1920.

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ORIGINAL ARTICLES.

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PENETRATING GUNSHOT WOUNDS OF THE CHEST.

By ROY F. YOUNG, M.B., B.C.,  
Late Captain, R.A.M.C. (T.C.); Assistant Surgeon,  
Western Infirmary, Glasgow.

A CONSIDERABLE amount of literature on gunshot wounds of the chest has been published throughout the period of the war. It may appear somewhat late in the day for a paper on this subject, but it will help to complete the statistics which have already been published, and it may throw some light on the prognosis and final results; moreover, the future surgery of the thoracic viscera must be influenced to some extent by the experience gained in the war.

The following notes are drawn from a series of 82 consecutive cases treated at a Base Hospital from the middle of August to the end of October, 1918. They include only those cases in which the pleura had been penetrated by a foreign body.

*Nature of the wounds.*—Forty-seven (57·2 per cent) were bullet wounds, and 35 (42·6 per cent) were caused by fragments of shell or by shrapnel. In the former, the bullet, in the large majority of cases (nearly 90 per cent), had completely penetrated the chest, causing, therefore, entrance and exit wounds ("E. and E."). In about 10 per cent the bullet had failed to pass out. In the latter, on the other hand, the fragments of shell, as might be expected from the roughness and irregularity of their surfaces and their lower velocity, more frequently remained lodged in the thorax; only two (less than 6 per cent) exhibited entrance and exit wounds.

*Complications.*—The nature, source, and other special features of complications which may arise in wounds of the chest have been gone into very fully by various writers, and it is not my intention to deal with these, except in such occasions as appear to lay any stress on a particular point. According to Soltau and Alexander, a certain number of cases present no abnormal physical signs, to account for which they offer some ingenious suggestions. In this series every case revealed some intra-thoracic change.

*Hæmoptysis.*—This was a constant sign where the lung had been penetrated or bruised. With three exceptions, in all of which the foreign body had penetrated the pleura without damaging the lung, hæmoptysis was present or there was a history of hæmoptysis. Except in one case, in which it persisted till the fifteenth day, the hæmoptysis was found to have stopped by the eighth day. In one case where the hæmoptysis had stopped by the third day, a very large fragment was found lodged in the lung.

*Subcutaneous (surgical) emphysema.*—This was present in ten cases on arrival at the Base. In seven it was associated with "E. and E." bullet wounds, all of which were complicated by fracture of ribs, and one may reasonably conclude that where subcutaneous emphysema is found in wounds of this variety there is also present fracture of ribs. In two cases of the lodging variety the x-ray report made no mention of the thoracic wall,

the search having been devoted to the location of the missile. In the remaining case there was no fracture of ribs, but there was a well-marked pneumo-hæmothorax. Soltau and Alexander consider the presence of subcutaneous emphysema as a "favourable sign, a safety valve preventing pneumothorax which has rarely been found associated." In these ten cases pneumo-hæmothorax was present in five, the diagnosis being corroborated by *x*-ray examination. It is probable that all cases of subcutaneous emphysema are associated with some degree of pneumothorax.

*Hæmothorax.*—This was present in 71 cases (86 per cent), in 21 of which there was also pneumothorax.

With regard to the source of the hæmorrhage, Rose Bradford writes that in the great majority of cases the bleeding is due to the injury to the lung, although cases may be seen occasionally where the hæmorrhage is derived from a vessel in the chest wall. It is probable that the hæmorrhage was pulmonic in origin in this series of cases as in all the cases, except two, where the lung had been penetrated a hæmothorax was present; whereas in nine cases where the pleura had been penetrated but the lung uninjured there was no hæmothorax. The signs and symptoms of hæmothorax have been fully gone into by Rose Bradford and others. In all of my cases, in which fluid was withdrawn from the chest, the effused blood was found to be defibrinated. Breathlessness was a regular feature, especially after any slight exertion. The majority of patients arrived in hospital with some degree of pyrexia: a few had subnormal temperatures, but soon became feverish after a rest. Three only arrived with normal temperatures which remained normal. The duration of the pyrexia, unaccompanied by sepsis, from the time of the reception of the wound was from six to seventeen days. In the majority of cases it lasted about eight days.

The physical signs, as borne out by others, were very complex. Dulness was always present; the diaphragm, as shown by *x*-ray, was higher on the affected side. Skodaic resonance was commonly found above the level of the fluid; ægophony and pectoriloquy were frequently found in a small resolving hæmothorax, and were looked upon as favourable signs, but in other apparently similar and equally favourable conditions the signs



were the common ones of fluid in the chest. In a few cases, in each of which a large hæmothorax was present, an increase in the vocal resonance was found, but this was unusual. In every case there was weakness or absence of the breath sounds. In only four was the breathing tubular, in each of which the hæmothorax was small and undergoing resolution, giving only a slight opacity to *x*-rays and soon clearing up. The provisional diagnosis arrived at by physical examination was confirmed or

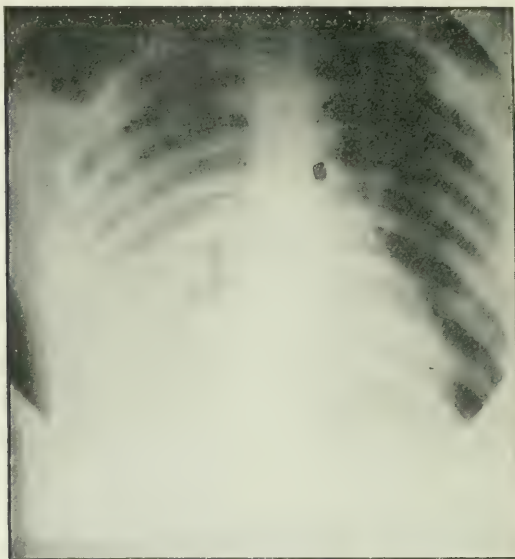


FIG. 1.

Hæmothorax, right side—Lodging fragment of shell.

confuted by exploration with a fine needle, and also in most of the cases by an *x*-ray examination.

In *post-mortem* examinations, where a hæmothorax was present, collapse of the lung below the upper limit of the fluid was found, and was generally associated with some emphysema and always with œdema of the non-collapsed portion.

*Pneumo-hæmothorax*.—According to Rose Bradford, this condition is very rare, but in this series there were 21 cases (25 per cent), 18 of which were of the simple variety and three were

due to gas-forming bacilli. As the gas in the former is pulmonic in origin one would expect to meet with it more frequently in wounds caused by shell than by bullets on account of the severer laceration: in ten of the eighteen this was the case, but in eight it was found with "E. and E." bullet wounds, in six of which, as confirmed by *x*-ray, there was also fracture of ribs. It is not suggested that in all these cases the rib had penetrated the lung, but that in some the bullet, after striking the rib, may



FIG. 2.

Pneumohæmorthorax, left side. Showing horizontal line of fluid and heart displaced to right—Density on right side due to old pleuritic thickening.

have acquired rotatory movement round its short axis and thus caused considerably more damage to the lung.

The signs and symptoms of this condition have been fully gone into in other papers. The most conclusive method of diagnosis is the *x*-ray. The accompanying Fig. (2) shows well the horizontal line of the fluid when gas is present with the hæmorthorax as compared to the less well-defined line of hæmorthorax alone.

*Pneumothorax.*—This condition, unaccompanied by hæmorthorax, was found only in one case, an "E. and E." bullet wound with fracture of the seventh, eighth, and ninth ribs. The *x*-ray plate showed a hæmorrhagic infiltration of the middle lobe and considerable displacement of the heart.

*Hæmorrhagic infiltration of the lung.*—This was found in nine cases, generally by *x*-ray examination, and in all cases

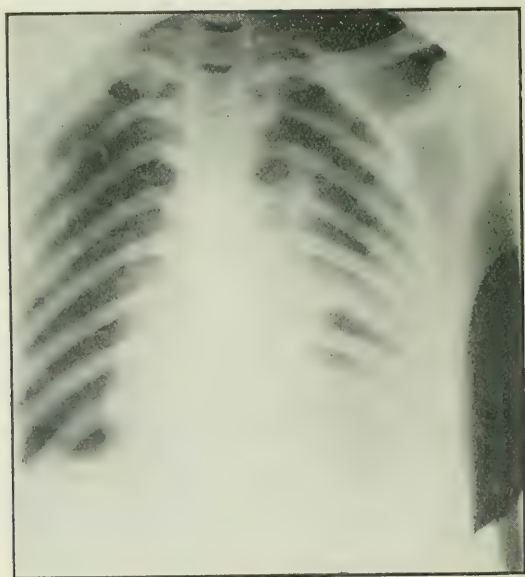


FIG. 3.

Resolving hæmorthorax, left side—Fracture of fifth rib near spine, with density in lung along path of bullet—Some displacement of heart to right.

coincided with the probable path of the bullet, or, in one case, shrapnel ball. In this last case and in one other there were tubular breathing and increased vocal resonance over the affected area, but no respiratory embarrassment or fever. In the others no abnormal physical signs were observed.

*Complications in the uninjured lung.*—In one case acute congestion and œdema followed operation. In two œdema was

found *post-mortem*, one with a small patch of consolidation. In three cases *x-ray* examination showed "increased density;" these three were all associated with a large hæmothorax on the affected side. One case of lodging wound of the right side with hæmothorax (sterile) was accompanied by a sterile serous effusion on the other side. One case which showed by *x-ray* a very marked density of the non-wounded side (Fig. 2) was proved at *post-mortem* to be due to old pleuritic adhesions.



FIG. 1.

Hæmorrhagic infiltration of left apex—Shrapnel ball lying against fracture of second rib—Small hæmothorax.

*Fractured ribs.*—This was definitely proved by operation or *x-ray* to be present in 28 cases, and may have been missed in some of the others. Its chief importance lies in its association with subcutaneous emphysema and pneumothorax. It was also found that "E. and E." wounds associated with fracture of ribs were more liable to give rise to infection within the pleura than in the cases where the ribs were uninjured. This should have some bearing on the conduct of the primary operation in which, in performing the toilet of the wound, simple excision of the



skin would appear to be insufficient, but should be combined with excision or cleansing of the fractured portion of the rib and toilet of the wound of the pleura.

*Abdominal complications.*—In seven cases the missile, after penetrating the chest, reached the abdomen. In two the spleen was wounded and both of these died—one from gas-bacillus infection of the chest, the other from secondary hæmorrhage of the spleen. In three cases the liver was involved, in two of which the foreign body was left untouched in the liver; all three recovered. In two cases the missile had passed from the chest into the abdomen without giving rise to any abdominal symptoms; both recovered. In one case the fragment of shell had passed the reverse way and, after doing considerable damage in the abdomen, finally lodged in the lung; death from peritonitis.

*Wounds elsewhere.*—Fourteen cases were complicated by additional wounds elsewhere. None of these, however, affected the chest condition to any degree, nor was any responsible for the death of the patient.

*Infection.*—Under this heading superficial infection of the skin wound has not been included, only those cases of infection of the pleural cavity.

Of the 42 "E. and E." bullet wounds 8 (20 per cent) became infected, and it is worthy of note that in all but two fracture of ribs was also present. Of the 5 lodging bullet wounds 2 (40 per cent) were infected; of the shell wounds 10 (30 per cent). In all, 20 (25 per cent) of the cases were infected.

*Aërobic infection.*—Staphylococcus, 3 cases, all of which recovered; streptococcus, 2 cases, with 1 death; staphylococcus and streptococcus, 1 case, with recovery; streptococcus and pneumococcus, 2 cases, with recovery.

*Mixed aërobic and anaërobic infection.*—Five cases, with 2 deaths. In all these cases the anaërobe was the *B. Welchii*.

*Anaërobic infection.*—*B. Welchii*, 2 cases with recovery; *B. Welchii* and *B. sporogenes*, 3 cases with 2 deaths.

Two other infected cases with discharging, sucking wounds

died shortly after admission to hospital; no bacterial examination was made.

These results entirely agree with other writers in that the dangerous type of infection is the mixed aërobic and anaërobic one, where the destruction of tissue by the aërobes provides a favourable soil for the growth of the anaërobes, or the combination of the *B. Welchii* with the *B. sporogenes*.

*Treatment.*—A rule, to which I found no exceptions, was that patients with penetrating wounds of the chest showed some signs of pulmonary distress on arrival at the Base Hospital. For this reason the primary examination was made as brief as possible. When satisfied that there was no call for immediate interference the first essential part of the treatment was complete rest for the patient in order to overcome the bad effects of the journey. The patient was placed in whatever position he found the most comfortable, and gr.  $\frac{1}{4}$  of morphia given. The best guide for the best position is the patient himself. Some preferred to sit up with a bed-rest support, some to recline, others to lie down on the affected side.

After a complete rest a more thorough examination was made. This included a physical examination, and, when possible, a search with *x*-rays. If a comparatively large hæmothorax was present the chest was explored by means of a syringe with a long, fine needle and the fluid sent for bacteriological examination. The *x*-ray examination, which was carried out in 61 of these cases, included screening and also plates, preferably stereoscopic when the missile was still lodging. Apart from the exact localisation of the foreign body the *x*-ray examination was directed specially to determining the presence and size of a hæmothorax or pneumothorax, infiltration of the lung, position of the heart and diaphragm, condition of the other lung, and the presence of fracture of ribs. Four of these plates are reproduced, and I am particularly indebted to Captain Dale for the excellence of his work and co-operation.

After examination on these lines the cases naturally fell into two groups—those which required operation and those which did not. The nature of the operation depends on a variety of conditions and may be considered under the treatment of the hæmothorax, sterile and infected, and the removal of the missile.

At a Base Hospital the patients arrive too late for a primary excision and suture of the wound. This was only carried out in one case which had been wounded two days previously, the wound healing by first intention.

*Operative treatment of hæmothorax.*—1. Sterile—Where this condition is present the reasons for interference are the same as those in an ordinary pleural effusion, namely, respiratory embarrassment and displacement of the heart, and the treatment is the same, aspiration. In most of these cases the fluid flows readily, as the blood is defibrinated; in some, possibly owing to adhesions, small quantities only can be drawn off without a fresh puncture. Several cases in this series required aspiration, and there were no bad results. The method employed was the Potain's aspirator. I have no experience of aspiration with oxygen replacement, but from what I have read of this method it seems to have much to recommend it.

2. Infected—In this condition certain factors must be considered in deciding what particular form of operation is advisable, the outstanding ones being the nature of the infection and the condition of the patient. It is impossible to dogmatise on the results of a limited experience, and one can only tabulate the nature and results of various forms of operation along with the reasons which, at the time, led to their use.

I. *Aspiration.*—Three cases were treated by simple aspiration.

CASE 5.—“E. and E.” wounds, left chest; pneumo-hæmothorax; heart displaced; aspiration of fluid for relief; bacteriological report, anaërobic infection (*B. Welchii*); recovery. As this patient improved rapidly after aspiration no further operation was attempted. A report from England, seven weeks later, stated that the condition of the chest was “normal.”

CASE 52.—“E. and E.” wounds, left chest; hæmothorax; aspiration to relieve symptoms; bacteriological report, pneumococci and streptococci numerous; recovery. For the same reason as above no further operation was done. Patient sent to England one month later. No subsequent report received.

CASE 53.—Wound right side, with bullet lodging in left side of chest; right hæmothorax with displacement of heart;

aspiration for relief; bacteriological report, pure staphylococci; recovery. No subsequent report received.

CASE 17 might also be mentioned here. In this case a large F.B. was removed from the right lung. Nineteen days later, owing to a collection of fluid in the pleura, 24 oz. of turbid serous fluid were aspirated, the infective agent being the *B. Welchii* in pure culture. Aspiration was repeated after some days, and the patient finally sent to England. In a letter received ten weeks later he says, "Appetite good, and am gaining flesh; three times aspirated since I left France; bicycled four miles yesterday."

In all these cases, except the last, this procedure was carried out in order to relieve symptoms, and it was the satisfactory amelioration of the condition, in spite of the bacteriological reports, that held one's hand from further interference. All these cases recovered. Two of them were pure *B. Welchii* infections, which organism is known to achieve its full virulence in the presence of aerobic organisms or the *B. sporogenes*. One case was a pure staphylococcic infection. These results suggest the possibility of aspiration in cases of unmixed infection where the patient does not show signs of extreme toxæmia, careful watch being kept on the condition after aspiration. Aspiration with oxygen replacement would seem to be indicated, especially in the case of the anaërobcs. The physical advantage, due to the closure of the pleura and the small degree of shock, is obvious.

## II. *Resection of rib—Complete evacuation of infected hæmothorax—Closure.*

The operative procedure was as follows:—Resection of about 4 inches of rib, fourth or fifth for choice, in the axillary line; retraction of ribs by means of Tullier's rib retractor, which permits of introduction of the hand into the pleural cavity; complete evacuation of the hæmothorax with gauze, and complete closure of the parietes in layers.

CASE 14.—"E. and E." wounds, right chest; hæmothorax; operation; bacteriological report, *B. Welchii* and *B. sporogenes*. Patient died suddenly five days later. *Post-mortem* examination showed considerable re-accumulation of fluid in pleural cavity.

CASE 73.—"E. and E." wounds, right chest; hæmothorax;



bacteriological report, staphylococci in pure culture; operation; recovery.

These were the only two cases in which this method was used. The first of them, with a mixed infection of *B. Welchii* and *sporogenes*, was obviously the wrong type of case in which to attempt this form of treatment. It was ignorance at that time of the virulence of this infection which allowed me to carry it out.

It was much later on, towards the end of this series, that this procedure was carried out in Case 73, with an excellent result. I would now consider this as an improved form of treatment in that type of infection which has been mentioned as likely to benefit by simple aspiration, as it has the same advantages and the additional one of complete removal of the hæmothorax, while, should bad symptoms supervene and aspiration be insufficient, it can readily be carried a stage further without much additional operative interference. The comparative disadvantage is that it is a more severe operation.

### III. *Resection of rib—Carrel-Dakin treatment.*

The operative technique consisted in resection of rib, 4 inches if it was intended to clear out the hæmothorax, or, if the patient was too seriously ill to stand this, a smaller piece, and as much of the hæmothorax allowed to escape as possible. Four Carrel's tubes were then introduced into the pleural cavity, and the parietes stitched closely round them in order to prevent suction through the wound. The tubes were then connected to a reservoir containing a solution of eusol, which at times was exchanged for saline solution. As an escape of fluid from the chest almost always occurred along the sides of the Carrel tubes the technique was later modified by the introduction in addition of a narrow, clamped drainage-tube, the clamp being removed in order to drain or wash out the cavity.

This method should be employed where the type of infection is more virulent, as, for instance, in mixed infections, and where toxæmia is a distinct feature. One case died.

CASE 65.—“E. and E.” wounds, left chest—Hæmothorax—Pronounced toxæmia—Bacteriological report, pure growth hæmolytic streptococci—Operation—Death six days later.

*Removal of the missile.*—In five cases a bullet had traversed the chest but remained lodged in the parietes. After localisation by *x*-rays the bullets were readily removed. Such cases are, to all intents and purposes, "E. and E." wounds, and have been grouped under this heading.

Where the missile was intrathoracic, operation was undertaken in those cases in which it appeared to be causing trouble. The operation was similar to that described above, the route, however, being through the entrance wound, and sufficient rib being removed to admit the hand after retraction with Tuffier's retractor.

In two cases the missile was in the lung.

CASE 17.—The hole in the lung was patent and the fragment of shell (1 by  $\frac{1}{2}$  by  $\frac{1}{8}$  inch) removed by forceps, the hole in the lung being sutured and also the parietes: recovery. The further progress of this case is mentioned under "Aspiration in infected hæmothorax."

CASE 20.—"E. and E." wound, right chest, with sucking exit wound at base, which had been sutured at a Casualty Clearing Station, but was septic on arrival—Considerable subcutaneous emphysema over chest—Fracture of ribs—Dyspnoea and cyanosis—Operation, fractured ribs excised and a portion of rib removed from the lung, suture of lung, Carrel's tubes—Death three days later.

In three cases the fragment of shell was in the pleural cavity. Two of these recovered without complications. The third developed B. Welchii infection, and the wound had to be opened up and drained eight days later. This case also recovered.

In another case (60) a fragment of shell had passed through the pleural cavity into the liver by way of the diaphragm. The track into the liver was found, but not the foreign body. After clearing out the hæmothorax the edges of the hole in the diaphragm were sutured to the parietes and the track into the liver packed through this. There was recovery without complications.

*Choice of anæsthetic.*—When the patient is acutely ill and toxæmic, the anæsthetic must of necessity be a local one. For this, novocaine, 2 per cent, was used. This is satisfactory if removal of a portion of rib and drainage is all that is aimed at.

For a more elaborate operation a general anæsthetic is required. For this gas and oxygen proved very satisfactory. The anæsthesia is good, and there are no bad after-effects. It is fair to add that Major H. Thursfield, officer in charge of the Medical Division, considered gas and oxygen a bad anæsthetic for chest cases, owing to the increased pulmonary pressure and congestion. He advocated warm ether anæsthesia, and demonstrated this method very satisfactorily in one of these operations.

*Post-operative treatment.*—There is no call for any special comment here, save the remark that in cases where a chronic discharging sinus remains the use of an autogenous vaccine proved very satisfactory indeed. Breathing exercises, to promote expansion of the lung, should be carried out.

*Results of operations at Casualty Clearing Stations.*—It is of considerable interest to review these results as seen at a Base Hospital.

I have divided them into two classes—primary, *i.e.*, where a toilet of the wound was carried out soon after the injury was received; and, secondary, on account of septic infection.

*Primary operations.*

1. *Excision of wound and suture.*—Of these there were seven. Three of them healed by first intention, and no complications followed. In none of these was there fracture of ribs. In three, all of which were associated with fracture of ribs, but where no resection of rib was practised, sepsis supervened and further operation was necessary. All three died. The seventh, with lodging fragment of shell and fracture of ribs, also became septic. Owing to his collapsed condition on arrival no operation was performed, and this patient also died.

2. *Excision of wound—Removal of fractured portion of rib—Suture of pleura and parietes.*—Of these there were nine. All of them, with one exception, healed by first intention and without complications. One case became infected with streptococci and staphylococci, and required further operative treatment at the Base.

A comparison of these results is sufficient to lay dramatic

emphasis on the necessity of toilet of the ribs in addition to the skin wound in cases of fracture.

*Secondary operations.*—These were carried out for infected hæmothorax, and in all of them the operation consisted of resection and drainage. There were six in all. Three recovered, infection with pure staphylococci, with pneumococci and streptococci, and with pure *B. Welchii* respectively. Three died, two arriving at the Base with discharging, sucking wounds, in which the pus was not examined. The third was interesting in that there did not appear any well-marked pathological reason for death.

CASE 44.—Lodging wound, right chest, with fracture of ribs, subcutaneous emphysema and hæmothorax—Operation three days after wound received, resection of rib and piece of shell and clothing removed along with stinking hæmothorax, Carrel's tubes. Patient arrived at the Base on fourteenth day very collapsed, and died a few hours later. *Autopsy.*—No fluid in empyema cavity—Right lung, upper lobe œdematous, otherwise normal, and had been functioning well, lower lobe collapsed—Left lung, slight œdema, otherwise normal, except for a small patch of consolidation in lower lobe.

*Mortality.*—In this series of 82 cases there were ten deaths (12·2 per cent). In the foregoing pages the causes of death have been ascribed except in one case.

CASE 49.—Lodging shell wound, right chest—Small hæmothorax, fluid sterile—Patient died very suddenly on the third day after arrival. *Autopsy.*—Right lung fixed by adhesions to anterior and posterior thoracic walls and also to diaphragm, with fluid enclosed in separate loculi, the total amount of fluid being about one pint (this case explains why some cases are difficult to aspirate)—The lung itself was healthy—Left lung slightly œdematous—Heart normal.

*The end-results of penetrating wounds of the chest.*—The immediate results may be gathered from a study of the records of the Casualty Clearing Stations and Base Hospitals. It is a matter of economic interest to try to arrive at some conclusion



with regard to the ultimate results, as, apart from the interest of the question, they affect the question of labour, efficiency, and the assessments of pensions. The pamphlet of instructions for members of examining medical boards for pensions purposes, as issued by the Ministry of Pensions, offers no suggestions with regard to pensions for wounds of the chest, and it is obvious that it would be impossible to lay down any hard and fast rule. It is possible, however, to arrive at some conclusions based on a general average.

With the object of following out the future history of these patients each one, on evacuation to England, was furnished with two post cards—one to the medical officer in charge of the case in England, asking for special details of the patient when discharged from hospital; the other to be sent on by him to the Medical Research Committee. To the latter, twenty-two replies were received, all that were received by the Committee; to the former, ten! As this system proved a failure, one had to have recourse to letters to the patients themselves, and by this means a fair number of replies have been received.

I have placed these under three classes—clean “E. and E.” wounds, lodging, and septic wounds.

I. *Clean “E. and E.” wounds.*—Fifty per cent were “fit for service” after treatment in hospital for about two and a half months. The term “fit for service,” however, does not imply that the condition of the chest was back to normal. The following case is probably a good average guide to those cases which were returned as fit.

CASE 83.—“E. and E.” wound, right chest; wounded in June, 1917—In hospital for four months, where the chest was aspirated; discharged October, 1917, as fit for service, category B2—Category A in April, 1918—Transferred in August, 1918, to A.S.C. as unfit for the infantry.

Re-admitted to hospital January, 1919, feeling very run down—X-ray report, no increased density right lung, right diaphragm moves normally. He was examined independently by Major Thursfield and Captain Coutts, who both found that the air entry at the right base was deficient, as compared with the left, and both assessed his disablement at twenty per cent—a unanimity of opinion which would surprise the laity.

With the remaining fifty per cent convalescence was generally established within three months. All are now, a year or so later, at work of some sort, and are in receipt of a pension varying from 20 to 30 per cent of disability. Many of them are still troubled with breathlessness after any exertion.

It appears, then, that it might be taken as a fair average that this type of case will be fit for work within a year, but with a disablement of 20 per cent.

II. *Clean lodging wounds.*—The prognosis here depends largely on the site of the missile. The hospital period before convalescence is longer than in the previous class of case, varying from two and a half to six months. Of those patients from whom replies have been received, 50 per cent were returned as fit for service after an average of three months in hospital. All of them, a year later, report themselves at work; in some cases their pre-war work having been changed for a more suitable occupation. They are all in receipt of a pension of 40 per cent disability. In two of these cases the foreign body is lodged in the liver, in one at the hilus of the lung. On the other hand, no replies have been received from a number, and it is unlikely, for instance, that a patient with a fragment of shell in the pericardium is performing any strenuous work.

On broad grounds, one may assume that fully three-quarters of these patients will be able to do good work after a year with a disablement pension of 40 per cent. Probably all will be fit for a sedentary occupation, such as that of a clerk.

III. *Septic cases.*—As might be expected, the hospital period is longer in this class than in either of the others. None of them was returned as fit for service, nor did any leave hospital under seventy-five days. All of those from whom replies have been received are now, over a year later, on light work, and in receipt of a disablement pension of from 20 to 40 per cent.

In conclusion, I must tender my thanks to many people, to Lieut.-Colonel R. S. C. Thompson, C.M.G., D.S.O., officer commanding No. 14 General Hospital; to Major H. Thursfield and Captain J. Coutts for advice and supervision in the diagnosis

and medical treatment of these cases; to Captain B. A. Peters for carrying out the bacteriological and pathological work; to Captain W. Dale for the *x*-ray work; and, above all, to Major Colin Mackenzie, O.B.E., officer in charge of Surgical Division, who initiated this special work at the hospital, and to whom much of the best work in this series is due.

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## THE FATALITY OF PEPTIC ULCER, AND THE IMPORTANCE OF EARLY DIAGNOSIS.\*

By JAMES CARSLAW, M.B.,

AND

JOHN M. COWAN, M.D.

SIMPLE peptic ulcer is generally recognised to be an "uncertain" and dangerous disease, but few of us perhaps realise that its mortality, as met with in hospital practice, is very considerable. In a series of 112 cases admitted into the Royal Infirmary under the care of one of us during the years 1906-16, fourteen patients died as the result of the ulceration, while another patient, who showed on *post-mortem* examination a latent ulcer in the duodenum, died from cardiac disease. The direct mortality is thus, in this series, 12·5 per cent.

AGE.	CASES.		DEATHS.	
	Males.	Females.	Males.	Females.
-9	...	...	...	...
10-19	3	11	1	...
20-29	15	29	2	2
30-39	12	15	...	2
40-49	4	6	...	...
50-59	5	4	2	1
60-69	5	1	2	...
70-79	1	...	1	...
80-	1	...	1	...
—	—	—	—	—
	46	66	9	5

112 cases, 14 deaths, 12·5 per cent.

### Deaths.—

Hæmorrhage,	-	8	Toxæmia,	-	-	1
Perforation, -	-	4	Exhaustion, -	-	-	1

\* Read at a meeting of the Royal Medico-Chirurgical Society, held on 5th December, 1919.



A similar mortality has been reported by several authors, though the figures range from the 2 per cent of Leube to the 18 per cent of Bulstrode. They may not, however, represent the true mortality of ulcer, for, as Fenwick pointed out, some patients die from causes other than the ulcer. In his series 73 per cent died from the ulcer, 18 per cent from pulmonary affections, 5 per cent from cardiac disease, and 1 per cent from cancer, tuberculous peritonitis, apoplexy, and Bright's disease. In our fatal cases two patients had mitral valvular disease, another a cirrhotic liver, a fourth hemiplegia, and a fifth paralysis agitans and myocardial weakness.

On the other hand, some of our patients may have died after leaving hospital, either from ulcer or from causes indirectly associated with it. Two at least of our patients required operative interference within a few years of leaving hospital apparently well. Serious symptoms, too, may recur at quite short intervals, as in the case of a girl who had severe hæmorrhages in April, 1907, May and November, 1908, April and May, 1909, all of which necessitated admission to hospital. Twenty-three of our patients had suffered from gastric symptoms, at intervals, for more than five years prior to admission, one of them for forty years!

Another striking fact in connection with ulcer is that *post-mortem* evidence shows that it is much more common than is appreciated clinically, and that while clinically the majority of cases occur in women (2 or 3 to 1), *post-mortem* the proportion discovered in men is considerably increased. In Martin's collection (59,480 cases) an ulcer or its scar was present in 4·4 per cent. Reinhard's statistics (10,000 cases) work out at 2·8 per cent. Many cases of ulcer must thus occur without recognition, and it is suspected that its frequency is at present increasing.

In contrast with the above series of cases we would bring forward our experience of ulcer as met with in the 3rd Scottish General Hospital, where it has been our lot to be in charge of medical wards from 1914 to 1919 (J. M. C., 1914-1916). There we had to treat in hospital many healthy young men who, often for rather trivial causes, were unable to remain with the

colours. In civil life many of these patients would never have entered hospital, receiving treatment in their own homes or at a dispensary. We have thus had the opportunity of observing in detail patients who, under ordinary circumstances, would have been under somewhat casual observation, and among them were a certain number of gastric cases with ulcer in the early stage.

A considerable number of cases of "peptic ulcer" came into our wards, but in this series we have excluded (1) those cases diagnosed elsewhere, which did not show any evidence of ulceration when under our care: (2) cases of gastric dilatation, without any signs of active ulceration; and (3) several cases which had been operated upon for gastric symptoms prior to their admission. Leaving these patients out of account, there were admitted to our wards 30 patients, nearly 1 per cent of the total admissions, who showed evidence of blood in the vomit or stools, in association with gastric symptoms of varying severity.

AGE.	CASES (Males).	DEATHS.
10-19	1	...
20-29	18	...
30-39	8	1
40-49	3	...
—		
	30	

Of these 30 patients 1 died during his residence. He was a man, aged 33, who had had hæmatemesis in December, 1914, for which he was nine weeks in hospital. The symptoms recurred in the beginning of September, 1915, hæmatemesis occurred on 12th September, and he was admitted to our wards on 21st September, very seriously ill. He was too ill to be submitted to surgical treatment, and the bleeding continued. Symptoms of peritonitis appeared on 9th October, and he died of exhaustion two days later.

Four at least of our patients required operation, either from the persistence of hæmorrhage or on account of its association with gastric stasis and dilatation. They all recovered from the operation, and three appeared likely to derive permanent benefit from it. In the fourth case a gastro-enterostomy could not be

performed on account of widespread adhesions, and though his condition on dismissal had much improved, the ultimate outlook seemed dark.

Nine patients proved unsatisfactory. Their symptoms improved after admission up to a point, and operative treatment was not indicated, but they tended to relapse as soon as they returned to ordinary diet. They had ultimately to be invalided out of the Service.

The most important feature of this series, however, is that no less than 15 of our patients, without any serious gastric symptoms, showed occult blood in their stools, some for even long periods of time, four, five, or in one case six weeks, but were all able to leave hospital "well." The majority of them were relieved from all their symptoms after a few weeks in hospital, and were with difficulty persuaded that the ulceration was not healed and still required a restricted dietary and rest in bed. It was only by strict discipline that their treatment could be maintained.

Take as an example the case of a man, aged 20, admitted into hospital complaining of pain in the abdomen after food. It had not existed for long and was not severe, but sufficient to prevent him from doing duty. Within three or four days all his discomforts disappeared, but the benzidin reaction was positive, and remained positive for thirty-seven days. It was negative on the forty-third day, for the first time. He had no recurrence of his symptoms and was discharged well.

A case of the same kind may be mentioned in some detail—one of the patients treated in the Royal Infirmary. This was a man, aged 29, admitted into hospital on 24th October, 1912, complaining of weakness and a feeling of heaviness in the stomach of some months' duration. He dated his ill-health from January, when he first noticed that his fingers were numb after washing, and that he occasionally felt dizzy. He did not enjoy his food as much as formerly, and sometimes felt sick after it, and he vomited it perhaps a dozen times in all. He never had any abdominal pain. He gradually became weaker, and in May was forced to stop work. In September he was in hospital for anæmia, and was discharged "cured" in three weeks. A fortnight later he again began to

feel weak. He complained of palpitation upon exertion, and of pain in the back. He still had some fulness in the stomach after food, but no pain, and he had vomited only once since September. He was badly nourished and very anæmic, the counts being—red cells, 3,000,000; white cells, 8,000; hæmoglobin, 30 per cent. He made no complaint of any abdominal discomfort during his residence, but on 25th-26th October passed stools that evidently contained blood in large amount, while the guaiac reaction persisted until 10th November, 1912. His progress was satisfactory thereafter.

These patients were all young men, the majority between 20 and 30 years of age, and suffered from a type of ulceration that is not likely to be seen in our civil hospitals, or to receive serious consideration from their private doctors. Cases of this kind probably supply a number of these tragic incidents of sudden severe hæmorrhage, or perforation, without warning, which all of us at times meet. It is with a plea for special care in the examination of patients suffering from "dyspepsia," and in particular for the examination of the stools for occult blood, that we bring this communication before the Royal Medico-Chirurgical Society.

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POST-GRADUATE MEDICAL TEACHING: THE  
POSITION IN GLASGOW.

IN the process of reconstruction which is everywhere taking place the health of the community occupies the forefront of the programme. The recent institution of a Ministry of Health has involved a large extension of public medical service. In consequence there has been much discussion on medical education—not only the education of the undergraduate student of medicine, but also of the medical man who is engaged in practice. It is with this latter form—post-graduate education—that the present memorandum more particularly deals.

The advance in medical science is so rapid that a practitioner may easily find himself out of date unless he has had opportunities of refreshing his knowledge at the various hospitals and centres of medical teaching. To a certain extent the reading of the medical journals helps him to keep abreast of the times, but this is a poor substitute for the knowledge that may be gained by periodical attendance at a teaching centre.

Post-graduate medical teaching in the United Kingdom generally has, hitherto, been of a somewhat sporadic and imperfectly organised character. For many years prior to the war post-graduate classes in medicine had been conducted at several of the hospitals in Glasgow, but no organised scheme was in operation whereby the teaching in the different hospitals might be correlated. It was felt that post-graduate teaching in Glasgow would be more effective if the courses were organised as a unit rather than kept separate and occasional, and that some arrangement was necessary whereby practitioners, especially those resident in Scotland, might find periodical facilities for refreshing their knowledge at a great centre such as Glasgow.

Early in 1914 the Medical Faculty of the University had their attention directed to the subject, and, on 6th March, 1914, at a largely attended and representative meeting of the medical staffs of the University and other medical schools and of the general and special hospitals of Glasgow, convened at the

request of the Medical Faculty of the University, a committee was appointed to promote co-operation between the various bodies concerned. Information having been obtained as to the facilities for post-graduate study in the various hospitals in Glasgow, an Executive Committee was formed to complete arrangements and draw up a syllabus for the purpose of instituting a general scheme of post-graduate medical teaching early in 1915.

With the outbreak of war in August, 1914, the scheme fell into abeyance, and nothing further was done until February, 1919, when, at a conference between the Medical Faculty of the University and the General Committee for Post-Graduate Medical Teaching, it was agreed to institute an emergency course of post-graduate medical teaching during the ensuing summer session, particularly to meet the needs of graduates who had been on service. This course was held during May and June last year, and a similar emergency course was held in September-October. The classes were clinical and practical, and specially designed to meet the needs of those who had been on service and were entering or re-entering on practice. Classes were held in medicine, surgery, obstetrics, and special subjects, and, in addition, a special course in clinical and practical tuberculosis was arranged at the Consumption Sanatoria, Bridge of Weir, and at their Tuberculosis Dispensary in Glasgow. The exceptional opportunities offered in the city for the study of gynæcology and obstetrics were so organised that any graduate could spend practically the whole of each day studying these important subjects. Special evening demonstrations, too, were arranged in diseases of the throat, nose, and ear.

The facilities offered were taken advantage of by doctors from places as far away as America and China, India, the West Indies, and South Africa.

Eighty-six graduates attended these emergency classes, and, while the majority were officers or ex-officers of the navy or army who were returning to general practice, a number of local practitioners who had been fully occupied in general practice throughout the war also availed themselves of the opportunity of refreshing their knowledge in the classes.

In December last a conjoint meeting of the Medical Faculty

of the University and the General Committee was held to consider the results of the emergency courses and to discuss the future of post-graduate medical teaching in Glasgow. It was the general feeling of those present that the time had come when a permanent scheme of post-graduate medical teaching should be initiated, and a special sub-committee was appointed to formulate such a scheme and to report later.

Under the chairmanship of Principal Sir Donald MacAlister, K.C.B., a conjoint meeting of the Medical Faculty of the University and the General Committee was held in the University on 2nd March last, when the report of the special sub-committee was brought up for discussion. It was unanimously agreed, on the motion of the chairman, to approve of the scheme as appended, and to remit to the special sub-committee, with powers, to arrange for the formation of the Board and to initiate the scheme.

The need for such an organisation and permanent scheme of post-graduate medical teaching on a large scale in Glasgow is urgent, and the time is highly opportune for the mobilisation of the teaching hospitals and institutions as one comprehensive post-graduate unit.

In the past the facilities offered by the medical centres of Germany and Austria regularly attracted large numbers of medical men, not only from Great Britain but also from abroad. After the war, however, there will be a natural reluctance on the part of medical men in this country and the allied countries to go to these centres.

The Americans and the French are organising their medical resources for post-graduate work, and in this country London is pursuing an active policy of concentration for the same purpose.

In 1917 a Post-Graduate Council was formed under the direction of Sir William Osler for the purpose of elaborating a permanent scheme of post-graduate work in London. This Post-Graduate Council developed into "The Post-Graduate Medical Association," for the purpose of organising permanent post-graduate teaching in Great Britain. The Fellowship of Medicine was founded in London in July, 1918, as the result of a meeting convened by Lord Eustace Percy, when the possibility was considered of establishing an organisation which might

unite the British profession with their overseas brethren in closer bonds of sympathy. Under the auspices of the Fellowship of Medicine, an emergency course of post-graduate medical teaching was arranged in London, and ran from January to the end of October, 1919. With the view of continuing their "Emergency Scheme" as a permanent one, the Fellowship of Medicine amalgamated with the Post-Graduate Medical Association on 24th October, 1919. Under the joint auspices of these two bodies, post-graduate medical teaching is organised on a permanent footing in London and is now being carried on vigorously.

Glasgow, with its abundance of clinical opportunities, should become one of the leading centres of post-graduate medical teaching. All that is wanted is organisation and co-operation, and it is to be anticipated that the new Glasgow Post-Graduate Medical Association, through its Board, will so co-ordinate and arrange the facilities available as to give Glasgow its proper place in what is really now an international movement.

### SCHEME.

Scheme for permanent post-graduate medical teaching in Glasgow, adopted at a joint meeting of the Faculty of Medicine of the University of Glasgow and the General Committee for Post-Graduate Medical Teaching, on 2nd March, 1920:—

### RECOMMENDATIONS.

I. That a central organisation be formed for the purpose of arranging, co-ordinating, and administering post-graduate medical teaching in Glasgow and the West of Scotland.

II. That this central body be known as the Glasgow Post-Graduate Medical Association.

III. That the Board of this Association consist of representatives elected by the teaching institutions and by the teachers taking part in the post-graduate teaching.

IV. That the representatives on the Board be appointed as follows:—



By the Teaching Institutions—	No. of Representatives.
University, . . . . .	2
Royal Infirmary, . . . . .	2
Western Infirmary, . . . . .	2
Victoria Infirmary, . . . . .	1
Royal Maternity and Women's Hospital, . . . . .	1
Royal Samaritan Hospital for Women, . . . . .	1
Royal Hospital for Sick Children, . . . . .	1
	—
	10

Conditional in each case upon the institution granting facilities  
for post-graduate teaching.

By the Teachers, . . . . . 8

Of the teachers' representatives not more than two are to be  
from any one Infirmary or Hospital.

Teachers qualified to elect representatives are to be those teachers who have taken part in the post-graduate teaching in either of the two years preceding the year of election.

V. That the representatives of the teaching institutions be appointed annually by those institutions, but all representatives to be eligible for re-election.

That the representatives of the teachers be appointed biennially to hold office for two years, but so that one half the number retire each year. All representatives to be eligible for re-election.

VI. That the Board of the Association, when constituted, may sanction the addition to its number of not more than four representatives of such other institutions, or combination of institutions as may take part in the scheme, as and when it may consider such action desirable.

#### SUGGESTIONS.

The Joint Committee are of opinion that the Association might with advantage arrange the teaching in accordance with the following general scheme:—

VII. *Practitioner courses.*—These to be of the nature of “refresher” courses for the general practitioner—four to six weeks’ duration, and twice a year (say, May-June and September-October). The classes to be held throughout the greater part of the day.

VIII. *Weekly demonstrations for practitioners in Glasgow and neighbourhood.*—One afternoon a week throughout the greater part of the year (say, from beginning of October till end of April), each meeting of an hour and a half’s duration. The demonstrations to be given by different members of the teaching staff as arranged.

IX. *Advanced and comprehensive courses.*—In these courses advanced and comprehensive teaching would be given, particularly arranged for those desirous of qualifying specially in one or more subjects. Each course should occupy the full time of the practitioner, and be of not less than six months’ duration, but so arranged that it may be taken in separate terms of three months each.

Comprehensive courses in the following subjects should be instituted as soon as practicable :—

(a) Obstetrics and child welfare (which may include gynæcology, diseases of children, &c.).

(b) School medical inspection and hygiene (which would include diseases of children, and such other subjects as diseases of the ear, nose, and throat, and ophthalmology).

(c) Tuberculosis.

(d) Venereal diseases.

Later, when it is thought opportune, similar advanced courses might be instituted in such subjects as ophthalmology, psychological medicine, radiology and electrology, dermatology, otology, laryngology, tropical medicine.

X. The committee consider that medical practitioners holding a recognised qualification, who have attended such advanced and comprehensive courses and show proficiency in the subjects studied, should be enabled to obtain suitable recognition of their work. The Committee would point out that by the provisions

of the University Court Ordinance No. XXXI, Glasgow No. 9 (Regulations for Degrees in Medicine), Section II, the University may, subject to Regulations to be made from time to time by the University Court, on the recommendation of, or after consultation with, the Senatus, confer diplomas in special branches of medical and surgical practice on graduates in medicine and surgery of the University of Glasgow, and also on other legally qualified medical practitioners who shall have pursued a prescribed course of study in the University.

In view of the provisions of the foregoing ordinance, the committee would recommend that the advanced courses should, if possible, be such as may be recognised as prescribed courses of study for such diplomas.

The recognition of such advanced courses by other corporate bodies for the purpose of qualifying for similar diplomas, granted or likely to be granted by them, should also receive the consideration of the Post-Graduate Association.

The possibility of obtaining such diplomas as a recognition of their work by qualified practitioners who had attended prescribed courses under the auspices of the Post-Graduate Association would be an inducement to them to prosecute their studies here. Further, in view of the numerous public appointments for which evidence of special training is required, such as those of Maternity and Infant Welfare Officers, Tuberculosis Officers, School Medical Officers, &c., it is to be anticipated that special diplomas would be of value as an index of a practitioner's suitability for such posts.

Failing some such arrangement, the Post-Graduate Association might consider the advisability of itself granting special certificates to such practitioners as fulfil the necessary conditions.

XI. *Special preparation.*—Arrangements might be made whereby qualified practitioners studying for higher qualifications could be introduced as demonstrators in the anatomical or other laboratories.

XII. *Research work.*—The Post-Graduate Association might advertise the facilities offered for Research Workers in medical subjects, and be the means of introducing suitable workers from other parts who may desire to come. The fact that the

University grants degrees of D.Sc. and Ph.D. for certain research work might be made known more widely.

XIII. *Young specialists* who wish to come here to see the work of our leading men might be introduced through the Post-Graduate Association.

XIV. *Teachers* who are prepared to take part in the teaching under the auspices of the Post-Graduate Association must undertake to conform to the general scheme of post-graduate teaching agreed upon by the Association.

The Committee consider that the teachers should receive payment for work done as far as funds permit.

XV. *Finance.*—The committee recognise that the question of finance will greatly influence the success of the scheme, and will be one for the serious consideration of the Post-Graduate Association.

The practitioner courses and the weekly demonstrations for practitioners could be easily arranged at once, as very little capital would be required to run them; but the advanced and comprehensive courses might present a more difficult problem requiring more prolonged consideration by the Association.

*Fees.*—The Committee are of opinion that fees should be charged for all teaching. No fee should be charged for the introduction of young specialists or research workers. As regards the latter, the question of expenses would fall to be arranged between the worker and the particular department in which he was engaged.

*Government grant in aid of post-graduate teaching.*—The committee recommend that the Post-Graduate Association should consider the practicability of obtaining some assistance from the Government, directly or indirectly.

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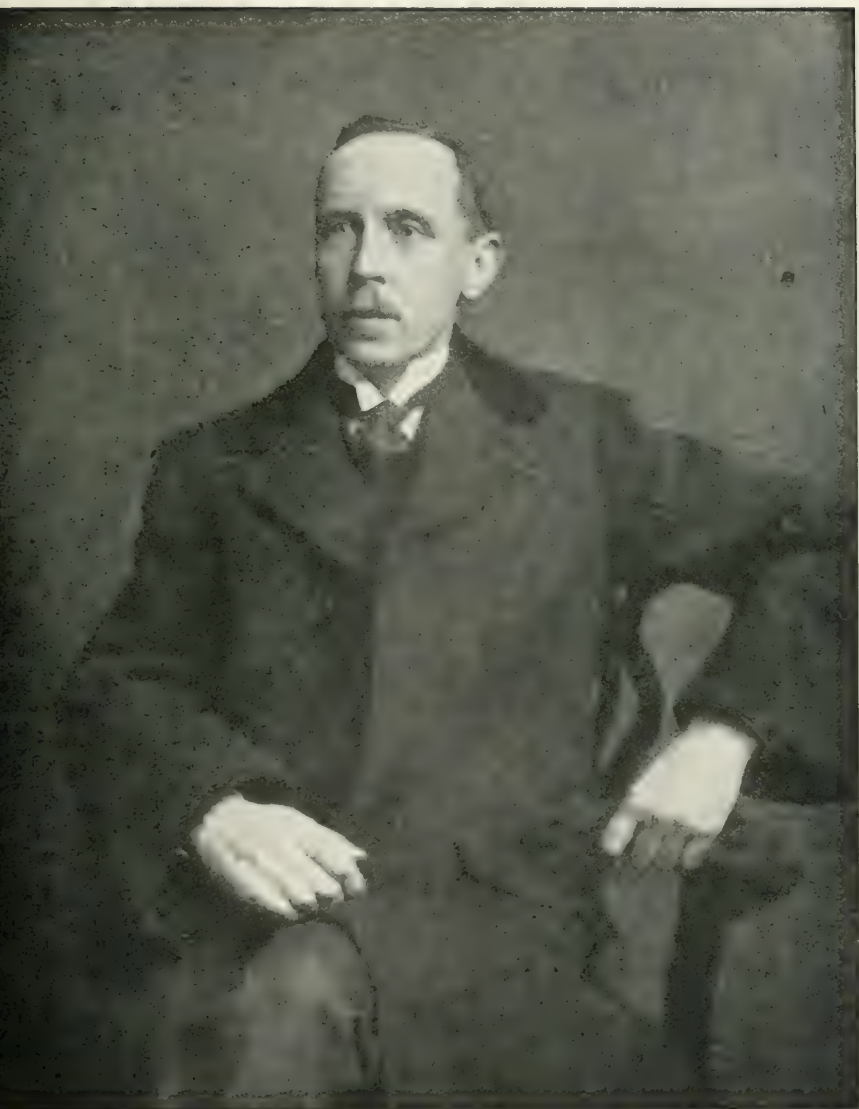
## Obituary.

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JOHN MORTON, M.B., C.M. GLASG.,  
GLASGOW.

IN our last issue we announced the death of John Morton, M.B., C.M., at the early age of 54 years. The sad event took place in a nursing home on Sunday afternoon, 21st March. He had been suffering for some time from a condition which latterly demanded surgical treatment. Hope was fully entertained that he would recover from the immediate effects of the operation, but death took place suddenly from heart-failure within forty-eight hours. He was buried at Hillfoot Cemetery, and the large number of medical men who attended the funeral bore striking evidence to the high esteem in which he was held by the profession.

Dr. Morton had attained an eminent position as a Consulting Surgeon, and had made for himself a widespread practice in Glasgow and the West of Scotland. His untimely death was peculiarly sad, because during recent years he had been reaping the well-earned fruits of long and arduous study in preparation for what was to be his life-work. Time and work had already left their mark upon a physique never too robust, but what tried his strength almost to breaking point were the duties he undertook during the period of the war. These involved the daily routine at the Western Infirmary, and the charge of several wards at the 3rd Scottish General Hospital (Stobhill), as well as private practice. Everyone in connection with both these institutions knew with what zeal and endurance he did all that was required of him, but it was only after he was demobilised that he admitted how greatly he had felt the strain. That was characteristic of the man. His work, which was always of the best, was done in a quiet, unassuming manner, but in it he inspired the loyal trust and confidence of all those whose privilege it was to assist him. This good relationship was greatly enhanced by his equable, kindly, and considerate attitude to all with whom he came into contact. These rare qualities of the man were especially evident in the treatment of the patients who came under his care. His colleagues will miss



DR. JOHN MORTON.



one whom they had learned to prize for his sterling worth, his sound judgment, and his straightforward, honest walk and conversation.

At such a time one naturally thinks first of John Morton as he presented himself to us a very short time ago, but in thinking of the past one is reminded of his brilliant success as a student, and of how, in 1892, he graduated "with honours," gaining the Brunton Memorial Prize awarded to the most distinguished student of his year. After graduation he settled in general practice in the West-End of Glasgow, and for some years acted as Demonstrator in the Anatomy Department of the University under Professor Cleland. He early associated himself with the work of the Western Infirmary, first as Dispensary Surgeon and then as Assistant Surgeon, which position he continued to hold till he was appointed Visiting Surgeon in charge of Wards. By this time he had already relinquished general practice and devoted himself to surgery. He made some important communications to medical literature dealing chiefly with abdominal surgery, an important contribution being "An Analysis of Series of Cases of Perforated Gastric and Duodenal Ulcers" (*British Medical Journal*, 1910).

Dr. Morton was a native of Ayrshire, and leaves a widow and son, who is also a member of the medical profession. To them both and to his aged mother we extend our sincere and respectful sympathy in their irreparable loss.

R. B. N.

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JOHN CRAIG WRIGHT, M.B., C.M. GLASG.,  
GLASGOW.

It is with regret that we record the death of Dr. John Wright, which took place at his residence, 23 Westminster Terrace, Glasgow, on 3rd April. About a week previously he contracted influenza, which soon became complicated by pneumonia and a rapid cardiac failure.

Dr. Wright was a native of Glasgow, and studied medicine at Glasgow University, where, throughout his course, he took a distinguished place in his classes. He graduated M.B., C.M. in 1885, and it is noteworthy and rather unique that he was the eldest of four brothers who all graduated in medicine at Glasgow University. Wright was one of the best known practitioners in the West-End of Glasgow, but particularly in the Anderston



district, where he had a large and busy practice for over thirty years. He also held the post of Casualty Surgeon in the Western Division of the city for over twenty years. Wright was very highly esteemed by his patients and friends as a straight man, and one who at all times gave of his best. Under a somewhat brusque exterior he hid a very kindly heart, and was ever ready to extend help wherever and whenever it was required. Though averse to public or showy work he rendered very useful service to his fellows on various committees, especially those connected with the British Medical Association and the working of the National Insurance Act. He was a very level-headed man with a keen business instinct, and his advice on these committees was always regarded as sound. His loss will be deeply felt in the Anderston district where he was such a familiar figure.

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WILLIAM STEWART, M.B., C.M.GLASG., D.P.H.,  
GOUROCK.

WE record with regret the death of Dr. Wm. Stewart, who studied medicine at Glasgow University, and graduated M.B.; C.M. in 1889. Later, he obtained his D.P.H. qualification. He practised for a short time in the East-End of Glasgow, but thereafter proceeded to Gourock, where he soon built up a good practice. For many years he acted as Medical Officer of Health there with much acceptance. He was highly esteemed, both socially and professionally.

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JOHN M. CLARK, M.B., Ch.B.GLASG.,  
ST. HELENS.

WE regret to announce the death of Dr. John M. Clark from influenzal pneumonia. He had a distinguished course as a student of medicine, and thereafter acted as House Surgeon in Mr. Paterson's wards at the Glasgow Royal Infirmary. He joined the R.A.M.C. in 1916, and served in German East Africa for nearly two years. On his return he was attached to the medical staff of the Pilkington Orthopædic Hospital, St. Helens, where his excellent work was much appreciated by his fellow-workers and by his patients. He contracted influenza, which was complicated by pneumonia, to which he succumbed. His early death is much regretted by his many friends.

## CURRENT TOPICS.

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GLASGOW UNIVERSITY.—It is announced that the following have satisfied the examiners in the fourth (final) professional examination for the degrees of M.B., Ch.B.:—Alexander Mitchell Beaton, Alexander Kidd Begg, John Wm. Stewart Blacklock, Richard Ryther Stancer Bowker, Archibald Donald Brown, Annie Burns Cameron, John Parker Chisholm, George Michael Cooper, William Norman Duguid, Elsie Florence Farquharson, M.A.; Robert Fletcher, M.A.; Thomas Fletcher, Robert Adam Forsyth, Robert Gold Howat, Thomas Downie Hunter, M.A., B.Sc.; George Jamieson, Chung Un Lee, Barnett Lavine, Alex. M'Cheyne Macintosh, Peter Alex. Mackay, William M'Kendrick, John M'Kean Maxton, John Spence Meighan, M.A., B.Sc.; Marjorie Mitchell, Thomas Fraser Noble, Peter Crawford Rankin, Robert Scott Reid, Joseph Sachs, Marguerite Linck Sclanders, Cecilia Shiskin, B.A.; Thomas Stewart Stirling, Alex. Strang, Herbert Arnold Summers, John Leonard Turpie; John Dora Williamson. *Distinctions*—In Surgery and Clinical Surgery—None. In Medicine and Clinical Medicine—John W. S. Blacklock, Cecilia Shiskin, B.A. In Midwifery—William M'Kendrick.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—At the monthly meeting of Fellows of this Faculty Dr. James Alexander Adams, 5 Woodside Crescent, Glasgow, was elected as the representative of the Faculty to the General Medical Council for the period of five years. Dr. Adams succeeds Dr. D. N. Knox, who has resigned on the ground of ill health. Dr. Knox held the office for the period of twelve years.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—At a recent examination the following candidates satisfied the examiners, and were duly admitted as Licentiates in Dental Surgery of this Faculty:—George Logan Clark, Eric Norman

Commander, Bernard W. G. Dempsey, Thomas Weir Drummond, David Alex. Kennedy, Jenny H. Lightbody, David Armour Love, A. C. S. Martin, Elizabeth M. McKendrick, Stephen A. McLaughlin, Allanwood Neilson, Gilbert Park, Vera H. C. Pugh, Edith M. Scott.

WESTERN INFIRMARY, GLASGOW.—It is announced that Dr. M. Logan Taylor has been appointed a Visiting Surgeon, in room of the late Dr. John Morton.

SCOTTISH BOARD OF HEALTH: CONSULTATIVE COUNCILS.—In our last issue we referred to the setting up these Councils. It has since been announced that the Medical and Allied Services Council have appointed Sir Donald MacAlister, K.C.B., M.D., as their chairman.

UNIVERSITY OF DURHAM.—We note that at the Convocation held on 27th March, the degree of M.D. was conferred on Mr. David Fyfe, F.R.F.P.S.G., F.R.C.S.Ed., L.D.S., of 5 Clairmont Gardens, Glasgow.

GLASGOW ROYAL ARMY MEDICAL CORPS: TERRITORIAL APPOINTMENTS. — The following appointments have been made:—Assistant-Director of Medical Services—Col. G. H. Edington, T.D. Commanding Officers of Glasgow units—1st Lowland Field Ambulance, Lieut.-Colonel J. W. Leitch, D.S.O.; 2nd Lowland Field Ambulance, Lieut.-Colonel H. Wright Thomson, D.S.O., T.D.

ROYAL ARMY MEDICAL CORPS: WAR MEMORIAL.—A committee has been formed to deal with this question. All branches of the R.A.M.C. are represented on this committee, which includes also the Presidents of the Colleges of Physicians and Surgeons of England, and past and present Directors-General of the R.A.M.C. A permanent memorial is to be erected in London, with replicas in Edinburgh and Dublin should funds be available. On this memorial will be inscribed the names of officers, non-commissioned officers, and men who fell in the war. Towards this fund subscriptions are solicited from the public, and it is intended that funds ear-marked for the benefit of families shall be devoted to that purpose. Subscriptions should be sent to

the Hon. Secretary, R.A.M.C. War Memorial Fund; Captain A. R. Wright, D.S.O., War Office, Cornwall House, Stamford Street, S.E. 1; or to Messrs. Holt & Co., 3 Whitehall Place, London, S.W. 1.

#### ASSOCIATION OF SURGEONS OF GREAT BRITAIN AND IRELAND.

—The first annual meeting of this Association will be held in London on 13th-15th May, 1920, under the presidency of Sir John Bland-Sutton. The proceedings include the presidential address, short addresses by Professor Keith, Sir George Makins, and Sir Cuthbert Wallace; the exhibition of cases and specimens, and the viewing of operations in the various London Hospitals. This Association has been formed to fulfil, for the surgeons, the same functions as the similar Association for physicians, which has been so successful for a number of years past. It will take over the *British Journal of Surgery* as its official publication.

#### THE FINANCIAL POSITION OF VOLUNTARY HOSPITALS.—

During the past two months the annual meetings of many of the Voluntary Hospitals in Glasgow have been held, and reports have appeared in the daily press. These reports present manifold statistics, the main burden of which is to demonstrate an ever advancing increase of expenditure over income, and an ever multiplying of the numbers of those seeking treatment beyond the limits of accommodation.

It may be of interest to reproduce some of these figures:—

	Income.	Expenditure.	Deficit.
Royal Infirmary, .	£52,803	£98,677	£45,874
Western Infirmary, .	52,948	80,667	27,719
Victoria Infirmary, .	28,453	37,994	9,541
Maternity Hospital, .	3,043	7,038	9,493
Broomhill and Lanfine	(Increase only.)	(Increase only.)	
Homes, .	10,612	19,660	9,048
Paisley Infirmary, .	18,455	22,055	3,600
Greenock Infirmary, .	...	...	1,132

The figures of the increase in the number of patients seeking admission to these institutions are not all available. That there is an increase is sufficiently indicated by the statements that there are "something like 500 or 600 people daily waiting for admission to the Royal Infirmary," that the number of cases



treated in the Maternity Hospital in 1918 was 1,920, and in 1919 it was 2,711.

These large deficits are brought about mostly by the increase in the cost of living, of hospital furnishings, of drugs and dressings. The Hospitals are naturally suffering precisely in the same way as all private individuals at this time. But the deficits seem, in some instances, to be contributed to by relative decrease in the amount of voluntary subscriptions, while, at the same time, the actual numbers of patients requiring treatment are greater than ever before.

Now, it is of importance to determine the methods to be adopted by the managers of these vastly useful, indeed, essential institutions to meet deficits. In Paisley there has been no difficulty. That fortunate town is blest with large-hearted, generous people of wealth, and the adverse balance was wiped out a few days after the annual meeting. But the very large sum that is required to put the Glasgow Hospitals on the same happy footing is more difficult to obtain.

The outstanding feature of all the speeches made by chairmen and treasurers was that the voluntary principle must be maintained. Compulsory payment by patients, municipalisation, nationalisation, have each their advocates, and we must presume that the managers of the Infirmaries have had brought before them and thoroughly discussed these various alternatives. How, then, is the money to be obtained? We are told by better organisation of the annual subscribers, especially of the many thousands in our large industrial areas who do already subscribe. We are glad to observe the success of a strong movement in very many public works whereby subscriptions have been increased fourfold and more. And the employees' delegates on the boards of managers have, on the invitation of the Lord Provost, met one another and the secretaries of the Infirmaries, and have formulated a scheme whereby a scale of subscriptions of from one penny to sixpence per week, in accordance with wages, has been proposed, and will, it is hoped, receive the mandate of the industrial workers. If this scale be accepted, and the scheme thoroughly worked, it is estimated that workmen's subscriptions will bring in £200,000, a sum sufficient to preserve the voluntary principle.

We most sincerely welcome this new seriousness in the minds

of the industrial classes in regard to our hospitals. Hitherto we have feared that they thought little of the great work done in the hospitals, and less of the means of finding the money to maintain them. We cannot recall that in any report of a Trades Union Congress, or meeting of the Labour Party, the financing of Hospitals was ever discussed. Of course, Hospitals have nothing to do with politics, but they have a great deal to do with the welfare of the people, which we may presume is the chief concern of these powerful organisations. Incidentally, we may point out that the industrial workers, in our judgment, labour under two misconceptions. The first is that the penny or fourpence a week subscribed to Hospitals is an insurance and gives them the right to admission, the claim on a bed. To the great majority the idea of charity is remote from their minds. The second is that the medical, surgical, and nursing staffs are all well paid for their services. The ordinary working man is immensely surprised to learn that the visiting staff of our Infirmaries receive an honorarium of one pound per week, and many members of the staff get nothing at all. It is true that the staff have unsurpassed opportunities for gaining experience and for increasing skill, and they may indirectly benefit financially through holding these posts: but then they may not, and the work has to be done all the same.

Now, if the better organisation of the subscription lists is not productive, and continuously productive year by year of the large sums needed, it may be asked what other possible sources of revenue can be tapped.

In an article communicated to the *Glasgow Herald* three methods of raising money were suggested—

1. The provision of a number of beds for paying patients. This method at once raises difficulties in administration, in nursing, in provision of teaching material, in the establishment of distinctions between one group of patients and another. The private-room system used to prevail in both the Royal and the Western Infirmaries, and perhaps does so still, but it is disliked intensely by both doctors and nurses.

2. Asking patients admitted with accident or urgent illness to pay a sum for each day of treatment. Our voluntary hospitals perform the essential service of admitting any patient whatever, suffering from an urgently acute illness or from an

accident. But it is by no means the rule for these patients, very many of whom can well afford to pay, to offer any monetary return for services received. This is probably the result of thoughtlessness. If the matter were put reasonably to them they would be willing enough to pay some proportion, at least, of the expense they have incurred. And here the services of an almoner would be of great value. A tactful, energetic woman with intimate knowledge of Hospitals, a trained nurse preferably, would soon justify her appointment.

3. The payment by insured persons, without dependants, of the insurance benefit due them while in residence in hospital. The whole question of the relations of the societies approved under the Insurance Act, and the Voluntary Hospitals requires close examination, and the public should know what funds, if any, the infirmaries receive on account of insured persons treated by their staffs.

Additional methods of meeting the situation have been put forward in other cities. The managers of the London Hospital lately announced their intention to ask ten shillings per week from each patient for maintenance, treatment and nursing being free. In Birmingham an attempt is being made to keep out of Voluntary Hospitals people who are quite able and for the most part very willing to pay a moderate sum, but who cannot pay the fees demanded by the nursing homes, plus fees for surgeon or physician. St. Chad's Hospital, Birmingham, is fully described in the *British Medical Journal* (21st February, 1920). It is run by the medical profession with help from some business men who have invested money in it, and the guiding idea is that a patient will receive treatment of any kind with modern means of clinical diagnosis, surgical operation, radio-scopsy, consultation with other specialists, and so on, for any given period of time for an inclusive fee which is certainly within the reach of many who now crowd our wards.

There is another group or class of patients which should be excluded, though on other grounds, from the great general Hospitals—those suffering from surgical tuberculosis. The treatment of these will never be satisfactory in large, crowded, bustling city hospitals. The municipality may quite reasonably be expected to take over the care of surgical tuberculosis as it does pulmonary phthisis and fevers.

It is not yet realised by the public, and possibly not by all Hospital managers (though the self-sacrificing unrewarded voluntary labours of our Hospital Boards and the knowledge of medical affairs they acquire are most surprising), that surgical treatment is greatly wider in range than a few years ago, and that female patients in general surgical wards require as many beds as males. If we venture to think that the public do not concern themselves much with the financing of our Hospitals, we do think that the public are concerning themselves, and rightly so, very much more with their own health, and are more readily seeking surgical treatment than before the war at least.

What they need still is a stirring of the financial conscience that will influence them in two ways—to provide willingly funds to maintain our great charitable organisations for the real poor: and to be prepared to pay out of moderate means for medical and surgical services as readily as for football and picture houses and food.

**NURSES REGISTRATION ACT: APPOINTMENT OF PROVISIONAL COUNCIL.**—When the Government undertook to introduce a Bill for the Registration of Nurses, it felt compelled to provide one for each of the three countries in the United Kingdom and Ireland. The Nurses Registration Act provides for the establishment of a Provisional Council nominated in Scotland by the Board of Health. That Council must consist of 15 persons, 9 of whom must be trained nurses or matrons. The Provisional Council will have much work in framing the provisions and carrying out the regulations of the Act. The following are the newly nominated Council:—Appointed by the Privy Council—Captain Charles B. Balfour, C.B., Lord Lieutenant of the County of Berwick; appointed by the Scottish Education Department—Miss Norah Milnes, B.Sc., director of the School of Social Study and Training, Edinburgh University; appointed by the Scottish Board of Health—Dr. A. K. Chalmers, Medical Officer of Health, Glasgow; Dr. Katherine Clark, assistant medical officer to the Edinburgh Education Authority; Dr. H. E. Fraser, medical superintendent, Royal Infirmary, Dundee; Col. D. J. Mackintosh, C.B., M.V.O., superintendent, Western Infirmary, Glasgow; Miss Margaret Bell, Queen's nurse, Musselburgh; Miss Kathleen L. Burleigh, matron, Royal Hospital for Sick Children, Edinburgh;



Miss Annie Gill, R.R.C., lady superintendent of nurses, Royal Infirmary, Edinburgh; Miss Mary Hunter, Public Health Department, Glasgow; Miss Elizabeth T. Jones, school nurse, Edinburgh Education Authority; Miss Janet Melrose, R.R.C., matron, Royal Infirmary, Glasgow; Miss Florence A. Merchant, matron, Stobhill Hospital, Glasgow; Mr. T. Prentice, Mental Hospital, Hartwood, Lanarkshire; and Miss Margaret R. Stewart, secretary and treasurer, Scottish Nurses' Club.

SCOTTISH NURSES' ASSOCIATION.—The annual meeting of the Association was held in the hall of the Scottish Nurses' Club, 205 Bath Street, on Saturday, 10th April, 1920. In the Secretary's report submitted to the meeting it was pointed out that the activities of the Association, which had been in existence for eleven years, were to some extent suspended during the war, though frequent meetings of the Executive Committee were held. The Association concerned itself with all matters of interest to the nursing profession. Originally its objects were largely political. The Association drafted a Nurses Registration Bill of its own, carried on very active propaganda work locally and in London, and was received closely into the counsel of those concerned with drafting the Government Bill for Registration. It was also almost entirely instrumental in founding the Scottish Nurses' Club, and through its influence placed that flourishing social institution beyond risk of anxiety for its future.

Although the Registration of Nurses Bill was now an Act, the work of the Association had not come to an end. The Provisional Council had not yet been set up, and it was hoped that members of the Association would be called upon to become members of that Council. Parliament had so framed the Act that all the details of its operation in setting the standard of training, the conduct of examination, the admission to the Register of Nurses already qualified, the question of reciprocity with England and Wales and Ireland, which possessed identical Nurses Registration Acts, were left for future working out. The Scottish Nurses' Association, possessing as it did a very large and increasing membership of well over 2,000, and having amongst its office-bearers trained nurses and others thoroughly versed in all matters pertaining to the nursing profession, was

peculiarly fitted and competent to watch over the interests of nurses, and, if called upon, to advise the Scottish Board of Health in the detailed operating of the Act.

The office-bearers for the ensuing year were elected as follows:—President, Dr. McGregor Robertson, who succeeds Mrs. Strong, formerly Matron, Royal Infirmary, in the office; Honorary Secretary, Miss Margaret R. Stewart; Honorary Treasurer, Mrs. Newton Virtue, together with an Executive Committee composed of nurses, matrons, and doctors in Glasgow and the West of Scotland.

Mr. D. M. Cowan, M.P., addressed the meeting on the Nurses Registration Act for Scotland. He showed that the Act was essentially an "enabling" Act, that it was an Act passed to enforce the registration of nurses, and that the practical working out of its details was left to the Board of Health and Provisional Council to be set up. There was need therefore for unceasing watchfulness on the part of nurses themselves to see that the Act was finally such as they wanted. Nurses were concerned not only with their own interests, but with the interests of the public health, and in continuing the work of their Association they were carrying out the double duty. The Provisional Council was composed of fifteen members, of whom nine were to be trained nurses nominated by such organisations as theirs. Much of the future usefulness of the Act depended on the initial work of the Council in the first two or three years. He knew that in Scotland there was a feeling that it was unfortunate that there should have been three separate, though identical Acts for the United Kingdom and Ireland. But the Government saw hopeless departmental difficulties in the way of a single Act. He thought, on the whole, the Government's plan was the best, for by it Scotland was placed on an equal and independent footing with the other countries, instead of being possibly a small minority body appended to a larger English one with the attendant voting risks. Possibly, and this was proposed in Parliament, a Joint-Committee of the three Provisional Councils might be called into being to help to unify the standard of training and examination, even to establish a single register for the whole country.

## REVIEWS.

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*Tumours: Their Nature and Causation.* By W. D'ESTE EMERY, M.D., B.Sc.Lond. London: H. K. Lewis & Co., Limited. 1918. (5s. net.)

THE purpose of this monograph is to enunciate a theory of the parasitic nature of cancer.

Dr. Emery faces a very difficult task with great courage, and succeeds in holding the interest of readers all through the detailed train of arguments.

The first part of the body of the work is devoted to "Primary postulates for the parasitic hypothesis and their justification." The author then proceeds to consider the natural history of tumours in the light of this hypothesis, and passes to histological considerations. The life-history of tumours and its bearing on the question of experimental grafting are next very clearly discussed, and the author concludes the statement of his case by dealing very fairly with other theories, and by drawing analogies from plant pathology.

We have read Dr. Emery's book with great interest, but it is hardly for us to say what point in progress has been reached. He has propounded a theory with great ability. Time and the work of others yet to come will confirm or overthrow that theory; in either case Dr. Emery's work will have contributed much to the result.

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*Handbook of Anæsthetics.* By J. STUART ROSS, M.B., Ch.B., F.R.C.S.E. Edinburgh: E. & S. Livingstone. 1919. (7s. 6d. net.)

WE have no hesitation in saying that the author has admirably succeeded in giving what he modestly describes as "an attempt to present to the student and practitioner a condensed account of modern anæsthetic views and practice."

In some 200 pages he manages to stow away an amount of information that is truly surprising. The first four chapters deal with the various forces which modify the physiology of

the patient during an operation under a general anæsthetic. Under the chapter "Preparation of the patient" he advises a routine preliminary hypodermic injection of morphia ( $\frac{1}{6}$ ) and atropine ( $\frac{1}{120}$ ) three-quarters of an hour before operation. Personally, we favour the atropine, but in abdominal cases in particular we have found that morphia is apt in some patients to prevent or delay abdominal relaxation. He describes with clearness the methods to be employed in giving nitrous oxide, nitrous oxide and oxygen, ether, chloroform, and ethyl chloride; also he has a chapter devoted to local anæsthesia.

We note that in describing the Ormsby inhaler he gives directions how to commence ether anæsthesia by pouring ether on the sponge straight away. We do not believe that ether anæsthesia can be produced with any degree of comfort to the patient by that method. The best plan is to precede the use of ether by a small preliminary dose of ethyl chloride. There is an excellent chapter on "Intra-tracheal insufflation of ether," contributed by Dr. Torrance Thomson. We believe that in this book students and graduates will find one of the best accounts ever written on the art of anæsthesia. The book is fully illustrated, which helps markedly the elucidation of the text.

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*Gymnastic Treatment for Joint and Muscle Disabilities.* By Brevet-Colonel H. E. DEANE, R.A.M.C. London: Henry Frowde and Hodder & Stoughton. 1918. (5s. net.)

COLONEL DEANE, in this handbook, deals with the gymnastic treatment of disabilities other than those arising from organic nerve lesions. He shows what simple gymnastic exercises and games are, in his opinion, best calculated to obtain the desired results, and he gives details of illustrative cases.

There are interesting forewords to the book by Colonel A. Carless and Brevet-Lieutenant Colonel F. W. Mott.

Numerous illustrations accompany the text.

Colonel Deane's object in publishing his book is quite clear. He wishes to invite attention to the application which can be made of ordinary simple gymnastic exercises, on simple apparatus, to the treatment of certain disabilities, and we have every sympathy with his motive.



## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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EDITED BY GEORGE MACINTYRE.

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### OBSTETRICS AND GYNÆCOLOGY.

**The Cause of Eclampsia** (*Dublin Journal of Medical Science*).—Professor Hastings Tweedy, in his presidential inaugural address to the section of Obstetrics in the Royal Academy of Medicine in Ireland, after alluding to the death of Dr. Purefoy and the departure of Dr. Jellett, late Master of the Rotunda, to New Zealand, gave his opinion as to the cause of eclampsia. To Dr. Tweedy the cause of eclampsia was no longer a mystery. Referring to his paper read before the International Congress, London, 1913, his experience since confirms the views then expressed, namely, that ordinary foods became poisonous during pregnancy, and that in this condition these foods gave rise to toxæmia and eclampsia.

Professor Tweedy noted that a recurrence of fits ensued after a little milk or whey had been given to the patient. As the recurrence followed almost immediately, decomposition or irritation within the intestines could be excluded. His explanation is that there is a deficiency or rather, not sufficient antibodies in the mother's blood to deal with their normal work, plus the albumen constantly exuded into the maternal blood-stream from the ovum.

The Rotunda treatment—absolute starvation and intestinal lavage—aims at allowing these antibodies to work against the ovum albumen without hindrance from food particles in the mother's alimentary canal. Free absorption of water is Dr. Tweedy's sheet-anchor. Blood-letting removes a portion of the toxins, and, in addition, a quantity of the antibodies, and so does not improve the chance of recovery. Sweating is of no avail, as protein substances cannot be sweated away.

To strengthen his theory, he quotes statistics from a German source giving the great increase in mortality and disease in Germany due to the semi-starvation incident to the war. Under all headings, except eclampsia, there is an increase, but under eclampsia there is a marked improvement over all pre-war periods.

Professor Tweedy, however, feels that he is like one crying in the wilderness, but hopes that he will yet have honour in his own generation.

—JAMES H. MARTIN.

*Books, Pamphlets, &c., Received.*

- Wheeler's Handbook of Medicine, by William R. Jack, B.Sc., M.D., F.R.F.P.S.G.  
Sixth edition. Edinburgh: E. & S. Livingstone. 1920. (12s. 6d. net.)
- A Manual of Gynæcology for Students and Practitioners, by Samuel J. Cameron,  
M.B., B.Ch.Glasg., F.R.F.P.S.G. Second edition, revised. London:  
Edward Arnold. 1919. (25s. net.)
- The Future of Medicine, by Sir James Mackenzie, F.R.S., M.D., F.R.C.P.,  
LL.D. Ab. and Ed., F.R.C.P.L. (Hon.). Oxford Medical Publication.  
London: Henry Frowde and Hodder & Stoughton. 1919. (8s. 6d. net.)
- National Health: from Magic, Mystery, and Medicine, to a National Health  
Service, by Ferdinand Rees, M.D. Bristol: John Wright & Sons, Limited.  
1919. (1s. 6d. net.)
- X-Ray Observations for Foreign Bodies and their Localisation, by Captain  
Harold C. Gage, A.R.C., O.I.P. London: William Heinemann (Medical  
Books), Limited. (6s. net.)
- Encyclopædia Medica. Second edition. Under the General Editorship of J. W.  
Ballantyne, M.D., C.M., F.R.C.P.E. Volume VI.: Heat Fever to Inter-  
trigo. Edinburgh and London: W. Green & Son, Limited. 1919.
- Diseases of the Throat, Nose, and Ear for Practitioners and Students, by W. G.  
Porter, M.B., B.Sc., F.R.C.S.Ed. Third edition, fully revised under the  
Editorship of A. Logan Turner, M.D.Ed., F.R.C.S.Ed. With a photo-  
gravure portrait of Major Porter, and 79 illustrations, 44 of which are  
in colours. Bristol: John Wright & Sons, Limited. 1919. (12s. 6d. net.)
- The Johns Hopkins Hospital Reports. Volume XVIII. Baltimore: The Johns  
Hopkins Press. 1919.
- Transactions of the American Surgical Association. Volume XXXVI. Edited  
by John F. Binnie, M.D. Philadelphia: William J. Dornan. 1918.
- Manual of Surgery (Rose and Carless) for Students and Practitioners, by Albert  
Carless, C.B.E., M.B., M.S.Lond., F.R.C.S. Tenth edition. London:  
Baillière, Tindall & Cox. 1920. (30s. net.)
- Surgical Operations: A Text-Book for Nurses, by E. W. Hey Groves, M.D.,  
B.Sc., M.S., F.R.C.S. London: Henry Frowde and Hodder & Stoughton.  
1919. (21s. net.)
- Herman's Difficult Labour: A Guide for Students and Practitioners. Sixth  
edition, revised and enlarged by Carlton Oldfield, M.D.Lond., F.R.C.S.Eng.  
With 198 illustrations. London: Cassell & Co., Limited. 1920. (16s. net.)
- Oto-Rhino-Laryngology for the Student and Practitioner, by Dr. Georges  
Laurens. Authorised English translation of the second revised French  
edition by H. Clayton Fox, F.R.C.S.Irel. With a Foreword contributed by  
J. Dundas Grant, M.A., M.D., F.R.C.S. With 592 illustrations. Bristol  
John Wright & Sons, Limited. 1919. (17s. 6d. net.)

**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDED 24TH APRIL, 1920.**

	WEEK ENDING			
	April 3.	April 10.	April 17.	April 24.
Mean temperature, . . .	44·3°	42·7°	44·2°	46·4°
Amount of rainfall, . ins.	0·69	0·31	0·79	0·44
Deaths (corrected), . . .	376	380	414	410
Death-rates, . . . . .	17·6	17·8	19·4	19·2
Zymotic death-rates, . . .	1·5	1·4	1·7	1·5
Pulmonary death-rates, . .	6·0	4·5	6·4	6·1
DEATHS—				
Under 1 year, . . . . .	64	76	74	97
60 years and upwards, . .	93	104	108	107
DEATHS FROM—				
Small-pox, . . . . .	2	...	..	3
Measles, . . . . .	22	17	25	20
Scarlet fever, . . . . .	3	1	2	1
Diphtheria, . . . . .	3	5	5	3
Whooping-cough, . . . . .	3	5	2	4
Enteric fever, . . . . .	1	...	2	1
Cerebro-spinal fever, . . .	...	1	1	1
Diarrhœa (under 2 years of age),	2	5	1	7
Bronchitis, pneumonia, and pleurisy, . . . . .	119	91	139	135
CASES REPORTED—				
Small-pox, . . . . .	5	1	14	9
Cerebro-spinal meningitis, .	3	2	3	3
Diphtheria and membranous croup, . . . . .	52	55	30	44
Erysipelas, . . . . .	23	19	16	23
Scarlet fever, . . . . .	74	80	65	59
Typhus fever, . . . . .	...	...	...	...
Enteric fever, . . . . .	1	4	4	5
Phthisis, . . . . .	40	50	54	56
Puerperal fever, . . . . .	5	10	6	12
Measles,* . . . . .	615	412	611	849
Ophthalmia neonatorum, . .	16	25	17	16

\* Measles not notifiable.

THE  
GLASGOW MEDICAL JOURNAL.

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No. VI. JUNE, 1920.

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ORIGINAL ARTICLES.

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“RHUMATISME TUBERCULEUX,” OR TUBERCULAR  
RHEUMATISM.

By LEONARD FINDLAY, M.D., D.Sc.,

Lecturer on Medical Diseases of Infancy and Childhood, Glasgow University;  
and Visiting Physician, Royal Hospital for Sick Children, Glasgow.

THIS variety of rheumatism receives little or no mention in English literature, and our knowledge regarding it is chiefly due to the work of the French physicians, especially Poncet and Leriche. There are, it is true, occasional papers on the subject in the English journals, and those by Raw,<sup>1</sup> Parkes Weber,<sup>2</sup> and Thomson<sup>3</sup> may be mentioned. Raw quotes one case of multiple arthritis of the wrists and fingers personally observed following tubercular cervical adenitis.

The condition is described as primary or secondary according as to whether the arthritic manifestations precede or follow the development, or at least the clinical appearance, of visceral



tuberculosis. According to Poncet<sup>4</sup> the latter variety is not uncommon, occurring in about 10 per cent of all cases of medical and surgical tuberculosis. In my own experience it is not anything like so frequent as this in medical tuberculosis, and from conversations with my surgical colleagues, it would seem, at least in this part of the world, to be exceedingly rare in surgical tuberculosis. Raw remarks that he has not met with a single instance among 6,000 cases of pulmonary tuberculosis.

In symptomatology the secondary variety does not differ from the primary form to be described in detail below, but its association with a definite tubercular lesion leaves, as a rule, no room for doubt regarding its nature.

The primary variety is, however, according to all authorities, unquestionably rare, and this may in part be the reason for its neglect by English authors. The condition may simulate ordinary rheumatic fever or acute rheumatism so closely that for a time the true nature of the infection is not appreciated. The pain and swelling may flit about from joint to joint as is so characteristic of rheumatism, be accompanied by slight fever, be followed by pericarditis, and though not, as a rule, influenced by the administration of salicylates, may apparently be so, as one of the cases recorded later by the author shows. It is thus seen how difficult, if not impossible, it may be to make a correct diagnosis. The whole mischief may completely resolve, when the case in all probability would be looked upon, and entered in the case records as rheumatic fever. Not infrequently, however, gross visceral tuberculosis develops immediately afterwards or some time later, and thus finally enables a correct diagnosis to be made.

Poncet<sup>5</sup> records the following short clinical summary of a case observed by Bezzoneau:—"A young woman, previously quite healthy, is suddenly afflicted with acute polyarthritis. One makes the diagnosis of acute articular rheumatism, and the patient is given large doses of salicylate of soda. For a matter of thirty days the condition remains stationary without improvement or aggravation until endocarditis develops, then meningeal phenomena, pleurisy, and finally peritonitis with death. The disease had lasted about one year."

The following are records of three cases which have come under the notice of the author, and which demonstrate fairly well not only the clinical picture but the difficulties of diagnosis:—

CASE I.—J. S., male, aged 9 years, came under observation on 1st April, 1903, while the author was resident physician in the Royal Hospital for Sick Children, Glasgow. Four months previously the patient had suffered from what his mother called “rheumatic fever,” characterised by pain and swelling of the joints of both arms and legs and slight fever, lasting for seven weeks. He apparently made a good recovery and returned to school. The illness for which he was admitted to hospital commenced about four weeks previously with generalised pains and inability to raise the legs on account of pains in the knees. Practically all the joints in his limbs became affected, and the mischief is said to have flitted about from joint to joint. He was fevered and restless at night, and perspired profusely. He was not, however, confined to bed during the whole of the illness, but would be up for a day or two now and again. He latterly became breathless on exertion and developed a slight cough.

The family history was negative with regard to rheumatism and tuberculosis.

On admission to hospital he was slightly fevered— $100.4^{\circ}$  F.—was pale and emaciated, with tenderness and pain on movement of the left shoulder and both knees, but there was no apparent swelling in any of these joints. The pulse was weak and rapid—100 per minute—cardiac dulness was much increased, and auscultation revealed coarse pericardial friction with to and fro rhythm, and the heart sounds very faint.

There was complaint of pain on the right side of the chest on taking a deep breath, and examination discovered at this point impairment of the percussion note with a coarse pleural friction.

Otherwise physical examination was negative.

With anti-rheumatic treatment the pains in the joints disappeared—the pericardial condition improved in so far as the cardiac sounds became more audible and the friction rub much

less so, but fever ranging from 100° F. to 101·4° F. continued. The pleural friction at the right base also got less marked, but headache commenced to be troublesome, and six days after admission the patient suddenly became unconscious with the development of rigidity of the neck, spasticity of the limbs with occasional twitchings, nystagmoid rolling of the eyes, internal strabismus of the left eye, increase of the pulse-rate from 120 to 136 per minute, and he died twenty-four hours later, *i.e.*, eight days after admission.

A *post-mortem* examination was made with the following result:—

On opening the thorax the right lung was found adherent in its whole extent to the chest wall. The pleura was much thickened and covered with a (bread and butter) fibrino-plastic exudation: the thickening of the pleura was most marked on the diaphragmatic surface where tubercles were seen. The right lung was increased in consistence and numerous tubercles were scattered throughout. There were several enlarged caseous glands in the mediastinum, one especially large being situated at the bifurcation of the bronchi, and in connection with it there was a fairly large tubercular focus at the root of the right lung.

The pericardium was thickened and distended by a blood-stained serum. Both surfaces were covered with a fibrino-plastic exudation most rough and most prominent over the right ventricle. The heart was very much enlarged and hypertrophied, but otherwise normal.

On examination of the brain a basal meningitis—tubercular in character—was discovered, obliterating the structures at the base and causing adhesion of the two opposing surfaces in both Sylvian fissures.

The diagnosis made in this case during life was that of rheumatic fever followed by pericarditis, pleurisy, and, finally, meningitis or "cerebral rheumatism," and tuberculosis was not suspected till the organs were exposed on the *post-mortem* table.

In those days lumbar puncture was, unfortunately, not a routine procedure in cases of suspected meningitis, since, had

this operation been performed, a correct diagnosis would almost certainly have been made. In those days, too, rheumatic meningitis was more frequently spoken of, and was supposed at times to account for the hyperpyrexia and cerebral symptoms in the severe examples of this infection. It is, however, just the presence of infection of the meninges and pleura which should cause one to hesitate in making a diagnosis of rheumatic fever.

The older writers, *e.g.*, Trousseau, and even recent authors, speak of rheumatic pleurisy, but in view of our knowledge of the bacteriology and histology of pleural exudates it is exceedingly doubtful if the micrococcus rheumaticus (if, indeed, this should ultimately turn out to be the *contagium vivum*) ever causes a primary pleurisy. Pleurisy as a direct extension of a pericarditis does undoubtedly occur, but that is in quite a different category from a primary pleural infection, or a patch of pleurisy well removed from the pericardium, as in the case recorded above. Osler in one place in his *Principles and Practice of Medicine* says that the rheumatic infection is a cause of pleurisy, while in another place he admits that many cases of pleurisy, supposed to have been rheumatic, are revealed at the *post-mortem* examination to be tubercular in origin. All specific toxins have a tendency to show selective action, and certainly the rheumatic toxin shows a marked predilection for the joints, pericardium, and endocardium. It must be admitted that it is remarkable that an infection which attacks so frequently one lymph sac should so constantly avoid others, but nature does not always behave in what seems to us a consistent fashion.

Whatever reason there may be for our scepticism regarding the existence of rheumatic pleurisy, there is much more for denying the possibility of such an etiological factor in meningitis. Trousseau<sup>6</sup> in an interesting article on cerebral rheumatism goes into the whole question from the point of view of symptomatology and gross pathology, and concludes that in rheumatism meningitis does not occur. The editor of the English translation for the Sydenham Society edition of Trousseau's works quotes many instances where meningeal symptoms were present, and yet *post-mortem* nothing abnormal, but some congestion of the



cerebral convolutions was detected. He also, however, records in his footnotes cases of arthritis associated with purulent meningitis, and concludes that meningitis may be a complication. The association of a septic arthritis and meningitis is well known, but has nothing whatever to do with the question under discussion. The diagnosis to-day would be decided by a bacteriological examination of the effusion into the joint and meninges, a method of examination unknown to those earlier writers.

The Clinical Society of London<sup>7</sup> in 1882 appointed a committee to enquire into the causes and treatment of rheumatic hyperpyrexia, and this committee concluded that two cases out of those investigated showed evidence of meningitis *post-mortem*. In neither case, however, was a bacteriological examination made, and the records of the cases, made available by the report, leave much room for scepticism. In one case old pleural adhesions were detected with old and recent meningitis, and with the symptoms (headache, vomiting, and constipation) suggest a possible tubercular nature.

Poynton<sup>8</sup> records the case of a boy of 13 years who died from rheumatic pericarditis with hyperpyrexia and meningeal symptoms, in which a basal and spinal meningitis, disclosing a scanty diplococcus, was detected in film. Poynton is inclined to consider the organism the diplococcus rheumaticus, but he admits that after inoculation of a rabbit, a capsulated organism, suggesting the pneumococcus, was obtained from its blood. One knows that pneumonia is occasionally a complication of rheumatic fever, and yet the pulmonary lesion is due to the pneumococcus.

On looking back on my own case in view of more extended experience, it seems to me that the clinical features—pleurisy and meningitis—should have suggested another, if not the true, diagnosis. As previously stated, pleurisy may occur in rheumatism as an extension of pericarditis, but pleurisy such as occurred in our case at a point (right base) far removed from the pericardium is undoubtedly rare, and it remains yet to be shown, in spite of the opinions of the different workers quoted above, that the rheumatic poison can call forth meningitis. Theoretically, we see no reason why in acute rheumatism certain serous sacs should be so frequently affected, and others

rarely, if at all, but in clinical medicine one is always being impressed with the rigidity with which a disease obeys its own hereditary laws. We do not forget that at present there has arisen a school of pathologists who oppose this teaching, and believe that they, for example, have seen and can cause one organism to become changed into another, and hold that the recognised classification of bacteria is too artificial. This view is probably to be accounted for by the great increase in the number of unskilled workers in bacteriology that has arisen during the war, but is happily not the view adopted by the majority of experienced bacteriologists.

CASE II.—R. P., male, aged 8 years, admitted to Royal Hospital for Sick Children, Glasgow, on 28th May, 1917. He was never a robust child, but was always apparently in good health, with the exception of ten months previously when he suffered for some considerable time from pains in the fingers and feet, which his mother considered of the nature of growing pains. In March, 1917, *i.e.*, nine months later, he became disinclined to go out of doors, gradually lost strength, and suffered from attacks of faintness, and latterly breathlessness on exertion.

There was no history of tuberculosis or rheumatism in the family.

On admission to Hospital he was described as a well-nourished child, but pale, with enlargement of the glands in both posterior cervical triangles, and in both axillary and inguinal regions.

There was slight fever of 100° F., and the pulse numbered 128 per minute.

Examination of the chest revealed a faint apex beat situated in the fourth interspace just outside the nipple line. The cardiac dulness was increased to the right and left, measuring transversely 4½ inches, and extended upwards to the left sterno-clavicular articulation. A coarse to and fro pericardial friction rub was both palpable and audible. The heart sounds could not be heard.

The respirations numbered 32 per minute. With the exception of slight dulness over the left apex in front, and in the left lateral region, nothing abnormal was detected on examination of the lungs.

The abdomen was tender; the liver was palpable two finger breadths below the costal margin; the spleen was just palpable. The urine normal. The tuberculin reaction with both bovine and human tuberculin was markedly positive.

Fever subsided within twenty-four hours, but as the case was looked upon as one of rheumatic pericarditis, salicylates were administered. The temperature continued normal for two weeks after admission, the patient became more comfortable, the pulse fell to 96 per minute, and the cardiac dulness diminished much in size, but friction was still audible. By the end of a fortnight the pericardial friction had disappeared, but fever reappeared and continued irregular and intermittent until his dismissal, two and a half months later.

At first, owing to the carious condition of the teeth, and as the patient was well under the influence of salicylates, the fever was ascribed to a septic condition of the mouth, but though removal of the teeth brought about an improvement in this condition, the irregular and intermittent fever persisted.

About six weeks after admission it was noticed that the abdomen had become more tender and distended with the presence of free fluid. Palpation revealed peritoneal or omental thickening, and one became inclined to the diagnosis of tubercular pericarditis and peritonitis.

The patient was taken home against advice, and it was learned that later enlargement of the glands developed on one side of the neck, with softening, and ultimately the formation of a sinus. About two months still later, he commenced to complain of pain in the left elbow, which became swollen, broke down, and discharged till death. Finally, severe diarrhoea appeared, the child emaciated rapidly, and he died in January, 1918, *i.e.*, nine months after he was admitted to Hospital.

Unfortunately, no *post-mortem* examination was obtained, but there would seem from the clinical history to be no doubt regarding the true nature of the condition. The involvement of the lymphatic glands, the peritoneal manifestations, and the implication of the elbow-joint do not leave any room for any other diagnosis than tuberculosis. The case is, however, a good example of primary "*rhumatisme tuberculeux*" characterised by

pains in the lesser joints, so commonly a manifestation of rheumatic fever in childhood, followed by pericarditis and other visceral lesions.

The following case is interesting as being an example of the condition in which it was possible to make a correct diagnosis on the date of the first examination:—

CASE III.—M. E., female. Admitted to the Royal Hospital for Sick Children, Glasgow, on 9th March, 1918. It was stated that the child had always enjoyed good health until six months previously, when she commenced to complain of pains in both shoulder-joints, and shortly afterwards of pain in both knees. The pain was said to have flitted about from joint to joint, but never to have been very severe, nor to confine her to the house. During the last two months the pains were said to have been more severe and to have involved the hip, ankle, elbow, and wrist-joints, as well as those of the shoulders and knees. No swelling of any joint was ever detected. Five weeks ago a swelling appeared on the left side of the neck, and this has gradually increased.

Both parents were said to suffer from rheumatism, and two of her maternal aunts had had attacks of acute rheumatic fever. An elder brother had recently developed pleurisy, otherwise there were no facts of interest in the family history.

On admission, the child was described as a spare child with a hectic malar flush. There was a large fluctuant swelling on the left side of the neck, and enlargement of the surrounding lymphatic glands. There was stiffness and limitation of movement of the right elbow-joint, but *x-ray* examination revealed nothing abnormal: otherwise, the joints were free from any manifestation of disease.

Examination of the heart, lungs, abdomen, and the nervous and digestive systems revealed nothing abnormal.

The reaction to both bovine and human tuberculin was positive.

The condition was diagnosed as one of tubercular adenitis with the formation of abscess on the left side of the neck, with



a previous history of tubercular rheumatism. She was transferred to the surgeon for operation.

Recent enquiry elicited the information that the patient was entirely free from the rheumatic pains for some time after the operation. They have, however, lately returned, but are much less severe than formerly. Her general health has improved.

This case calls for no comment.

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  - <sup>6</sup> *Clin. Med. Syd. Soc.*, edit. 1868, vol. i, p. 513.
  - <sup>7</sup> *Clin. Soc. Trans.* 1882, vol. xv, p. 261.
  - <sup>8</sup> *System of Medicine*, Osler and McCrae, 1st edition, vol. 1, p. 697; and *Researches on Rheumatism*, Poynton and Paine, London, 1913, p. 239.
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# THE REPAIR, BY BONE GRAFT, OF GAPS IN THE SKULL DUE TO CONGENITAL DEFICIENCY, INJURY, OR OPERATION.\*

BY ALEX. MACLENNAN, M.B., C.M.,  
Visiting Surgeon, Royal Hospital for Sick Children, Glasgow.

THERE are a few aspects of the subject of cranial defects which I wish to shelve before describing the plan I adopt to remedy them.

1. Should gunshot wounds of the head be treated by wide removal of bone? This problem will not be further discussed, but I may say it has been found that cases so treated have probably shown the best results. At the same time some discrimination must be applied in determining what is the most advantageous extent of such removal. It is, of course, essential to obliterate, if possible, the septic region, but in many cases this does not entail any wide clearance of bone. A further reason must therefore be found to vindicate a course of treatment which otherwise ultimately appears to be an

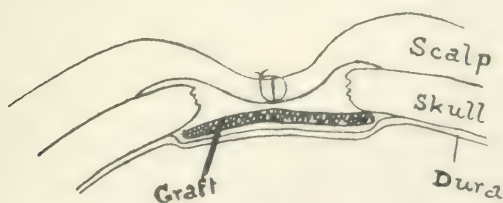


FIG. 1.

To show the relationship of the bone graft to dura and skull.

exaggerated technique. The effect of free exposure of the brain is beneficial, because it institutes a very complete decompression. Whether the large gaps we see in healed and

\* Read at a meeting of the Royal Medico-Chirurgical Society of Glasgow, held on 23rd January, 1920.

more or less cured cases have been necessary is a detail which cannot be determined at this stage, but the initial operator should not entirely forget the future problem which such an operation creates. In this connection I would propose that, in suitable cases, the bone removed should be imbedded, say, in such a place as the axilla, out of which, at a later period, it may be taken for service as a graft.

2. Another question to touch upon is that of the importance of rigid covering for the brain in those situations. I most decidedly believe that the individual is placed in a safer position by such covering.

3. Should this desirable protection be secured by external or

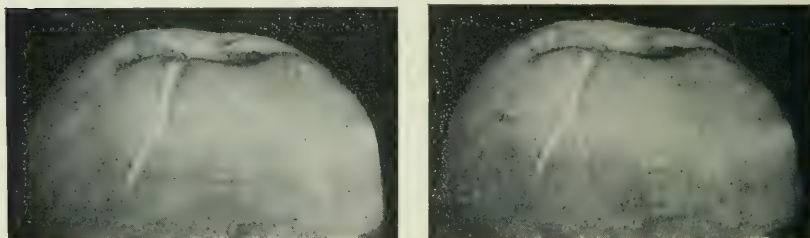


FIG. 2.

Lt. C., wounded, 31st March, 1918; decompression, 2nd April, 1918; graft operation, 7th February, 1919. Cerebral symptoms lessening, gap in skull measured  $3\frac{1}{2}$  inches by 2 inches, pulsatile and tender. *Result.*— Firm base, slightly tender; great improvement in general condition; no disability whatever in scapula.

internal means? Are the requirements of the case satisfactorily covered by the wearing of a cap containing some sort of armour plating over the defect? Obviously this is not even an approach to an ideal condition, but in many cases it is all that is advisable.

4. If the better procedure be to have the protective plate imbedded under the scalp, should this plate be one of metal or composition, or should it be of bone? Much may be said in support of the adoption of metal or celluloid plates; their use facilitates the operation very considerably, and many operators employ them by preference. My own view is that the less foreign material left in the wound the better, and I have therefore adopted the autoplasmic bone graft as the ideal

solution of the matter. Not having resorted to the use at any time of metal plates for this purpose, I cannot condemn them out and out, but from the analogy of the Lane plate in fracture the bone graft seems to me to be an easy first.

The technique of the inlay by bone is as follows:—The incision follows the line of the scar, which is, if feasible, excised. No special means is taken to control hæmorrhage, such as the use of the elastic or metal tourniquet. The scar and flap must be raised from the region of the gap most carefully so as to avoid opening the subdural space; in many instances it implies splitting the scar on the flat. The detachment of the tissue from the bone margin of the gap must be done in the same manner. The dura must be freed all round

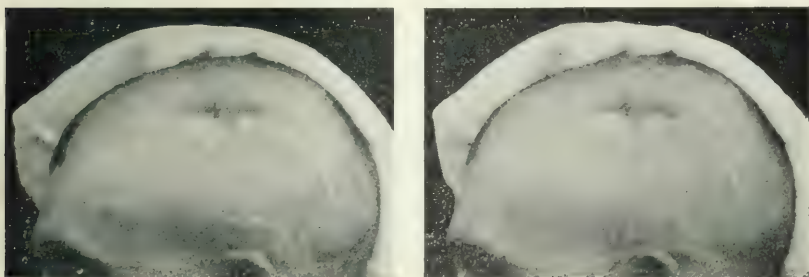


FIG. 3.

Pensioner B. Bullet wound, 13th October, 1915; depression pulsating; graft (scapula), 7th March, 1917; great improvement in symptoms.

the inner surface of the gap margin. The eburnated edge of the gap must be refreshed by rongeur forceps or the sharp spoon. This completes the main part of the operation. The flaps are clipped over a gauze pack, and the region protected by pads. The graft is then procured, and I have latterly utilised the scapula almost exclusively. An incision is made over the infra-spinatus (left) fossa parallel with the muscle fibres which are separated till the bone is reached. The periosteal elevator clears the scapula to the necessary extent. The graft of requisite size and shape is cut out by the osteotome or gouge. The elevator is then inserted under it, and the graft lifted from its bed. To avoid accidents to the graft I wrap it in a blood-soaked swab and stow it under the wrist of the glove. The separated



muscle and its covering fascia may or may not require subcutaneous suture. The wound is closed without drainage and protected by a strapping dressing. The head wound is then exposed and the graft fitted into the hole, so that it is entirely within the skull, resting between the separated dura and the inner table (Fig. 1, p. 251). It is firmly fixed by the intracranial pressure exerted by the expanding brain. Occasionally the graft requires trimming or supplementing by small slices from the outer table of the skull. The graft may require to be bent or fractured to

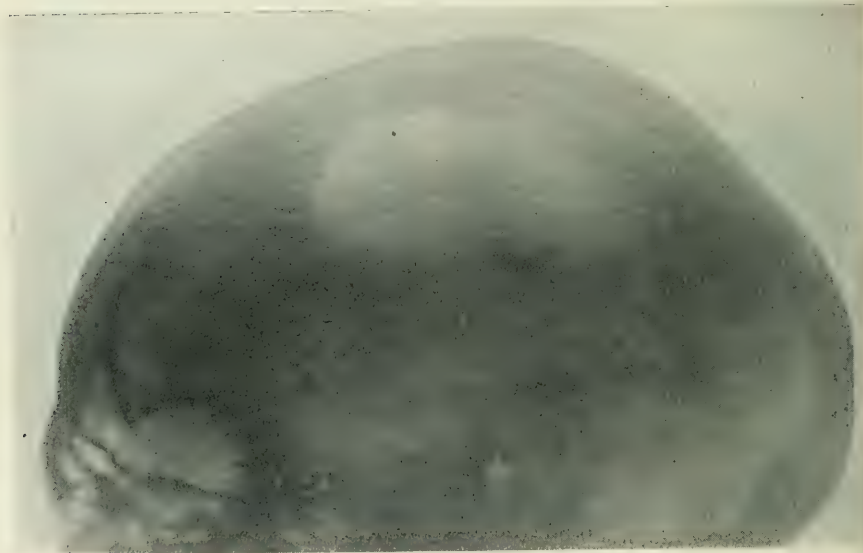


FIG. 4.

Skiagram of head shown in Fig. 3.

ensure a good fit. The skin edges are then sutured over it. The calvarium then presents even a more distinct depression than before the operation, but I have not yet observed any obnoxious symptoms referable to this feature. On the contrary, I consider the success of the plan largely due to the depressed situation of the graft. The scapula is used because no disability follows its mutilation, while the piece of bone is eminently suitable for its work. It is more or less plastic, and ultimately the depression is gradually reduced by the intracranial pressure.

The results I have obtained by the use of scapula have been

so uniformly satisfactory that I have seen no reason to employ other sources for the graft. Rib does quite well, but to fill in such gaps as can be done by scapula require most of one rib. The twelfth, which is sometimes recommended, is not large enough, and I am sure its complete resection would leave more discomfort than results from the interference with the scapula. On a former occasion I showed two stereoscopic transparencies of a case of cranial defect, the results of a compound fracture which had been filled in by rib grafts.<sup>1</sup>

The child shown to-night had rib graft used to fill in a congenital defect associated with a meningocele. The *x*-ray plate would induce one to believe that the gap was not entirely closed, and palpation would confirm this view. The original condition is shown by the plaster cast.

The next child had a decompression gap filled in by graft from the scapula, and the result of both interferences may be determined by examination.

The next case illustrates a very extensive lesion of the vertex due to shrapnel; the stereoscopic transparency and the plaster cast show the condition before operation, and the patient himself has kindly consented to demonstrate the result (Fig. 2, p. 252).

The next case is, I regret, only represented by a stereoscopic slide; the condition before operation is depicted (Figs. 3 and 4, pp. 253, 254).

The *x*-ray pictures of other cases similarly treated may be viewed. The ultimate fate of the graft cannot be determined, but in these two cases, at anyrate, it seems to be firmly rooted.

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## SOME SEPTIC CASES.

BY JAMES ALEXANDER WILSON, O.B.E., M.D.

DURING the war there were in the home hospitals many cases of septic wounds. The tissues around these wounds often became infected and swollen. Frequently suppuration followed, necessitating incisions and counter-incisions. Injured bone became diseased or necrotic, forming sinuses that kept discharging indefinitely. Periods of pyrexia, due to absorption of toxins, were associated with the varying conditions of the wounds. This sapræmia did not seem to do much harm, perhaps because the men were, for the most part, young, and had good resisting power. Months after the wounds were healed any operative or manipulative interference was liable to set up a recurrence of suppuration. The microbes persisting in the tissues were usually quiescent if not disturbed; but not always, and cases of protracted pyrexia were not uncommon. The following are examples:—

*Protracted pyrexia.*—A soldier was struck over the sacrum on 13th August, 1916. When admitted he had a large flesh wound. No evidence of bone injury was discovered, and the wound gradually healed over. But now his temperature rose some degrees above normal and kept fluctuating. Typhoid fever, paratyphoid fever, the long variety of trench fever, &c., were suspected in rotation, but we could not discover anything to account for his condition. His Widal report was—"Agglutination reaction positive against typhoid 1-25. Against paratyphoid A. and B. *nil*. In the presence of previous typhoid inoculation there is no bacteriological evidence of typhoid fever." The wounded area was well healed, and gave him no discomfort. A blood count was not made.

On 1st December—after two months of pyrexia—a swelling appeared just above the wound area. It was incised and pus

evacuated. An abscess cavity, extending towards the right kidney, was found. The temperature fell next day, and remained normal thereafter.

Another patient also had a wound over the sacrum. It healed up, and when considered fit for discharge we observed that this man's temperature was one degree above normal. He made no complaint of illness, but for several weeks he was kept under observation, when an abscess was discovered in the ischio-rectal fossa.

Other cases of pyrexia were often observed in the wards; cases that were not associated with the condition of the wounds. They did not present the symptoms or complications of influenza, but were cases of clear-cut, simple, two- or three-day fever. At first we called them ward fever, but later we looked upon them as being the short variety of trench fever.

*Lymphatic glands.*—As a rule the lymphatic glands were not enlarged or painful in cases of septic gunshot wounds, and the toxins that caused the rise in the temperature in these cases were probably carried by the blood-stream. Erysipelas was rarely seen during the course of septic wounds, but occasionally we got large patches of erythema. These were irregular in outline, quite superficial, and sometimes distal to the wound. These patches did not spread like erysipelas, and might be described as septic dermatitis. With these we got swelling of the lymphatic glands and high temperature.

In the following cases the microbes passed beyond the local area into the system:—

*Pyæmic abscesses following infected finger.*—Pte. N., suffered from trench fever in February, 1918. In February, 1919, when attending some rather dirty German prisoners, he cut his finger. This was followed by an abscess in the axilla of the same side, and thereafter he suffered from boils.

On 13th March he was admitted to hospital with a carbuncle on his back, and while in hospital his axilla again suppurated. About the middle of May a painful swelling formed in front of his right thigh, which rendered him unfit to walk. A few days



later a similar swelling formed in his left side, and he was readmitted to hospital on 30th May. On examination the swelling in front of his thigh measured about 8 inches by 4 inches. The other swelling was situated over the stomach and left lower ribs, and was not quite so large. They were painful to touch, felt firm and as if deeply situated. The skin was not reddened, and his temperature ranged from 100° to 102·5°. His breath was foul and his teeth were bad. On 3rd June his blood was examined and found to be sterile. On 4th June both swellings were opened and much pus evacuated. The pus from both abscesses gave a pure growth of *staphylococcus pyogenes aureus*. He made a good recovery.

The *staphylococci* gained entrance at the finger, and probably were responsible for the axillary abscess, the boils and carbuncle. Some remained in the tissues in a quiescent state for two months, and then almost simultaneously suppuration occurred at two places. At these places, and at the locality of the carbuncle, the vascularity of the tissues is not very great, and the resistance or natural defence is probably reduced proportionately. If the infection had been streptococcal, probably his illness would have been much more serious.

*Septic foot followed by synovitis and conjunctivitis.*—Pte. S., aged 25 years. On 25th April, 1919, when in France he had his foot punctured by a nail. The report on his card was—"Rt. foot red, swollen, and inflamed, especially on dorsum." "30th April, 1919.—Ulcer of toe, considerable swelling and tenderness of foot. Acute conjunctivitis." He was admitted on 8th May, 1919, as "I.C.T. foot." His right foot was much swollen, and he had acute conjunctivitis. A few days later blisters formed all over his foot. These were opened, and the whole foot swabbed with a germicide. Obviously the foot was in a very septic condition. On 3rd June the right knee-joint became swollen, and within two days the joint was full and tense. Major McNeill opened the joint by lateral incisions, and evacuated much clear fluid. The knee had not been injured in any way. The ankle on the same side was also slightly swollen. The fluid from the knee was reported to be "sterile." On 17th June the swelling was gone, and the incisions healed. On 23rd

June the left knee became swollen and the left wrist puffy. Three days later the left knee was also incised and much fluid evacuated. The report on this fluid was—"Organisms scanty, but cultures gave a pure growth of staph. pyo. aureus." By the middle of July both knees were quiet, and the movements of the joints good. A few weeks later he walked about quite well.

Right through this man's illness his eyes were very troublesome, and active treatment had little or no effect on the conjunctivitis. At one time the deeper structures seemed involved, and atropine was applied. As the general condition improved, so did the eye condition.

During the war this man had been "gassed," and his eyes had then been slightly inflamed, but in all probability this attack of acute conjunctivitis was due to the toxic condition of his blood.

*Septicæmia—Recovery.*—Pte. A., received a bullet wound in France on 8th April, 1917. He was admitted to hospital here on 24th April, and his tally was inscribed—"G.S.W.; thigh R." He informed us that his wound had not been dressed for five days. On the front of his thigh there was a wound measuring 3 inches by 2 inches, and at one part over 1 inch deep. His temperature on admission was  $104^{\circ}$ . He was given his second dose of A.T.S.—500 units.

Next day (25th April) he had hæmorrhage from a branch of the profunda femoris. This was ligatured. He was x-rayed, and the report was—"Rifle bullet present 2 inches deep on inner side of thigh. No bone damage." The bullet was removed by Major Sichel, through an incision on the inner aspect of the thigh, and Carrel's treatment was begun. For four weeks this man ran a high temperature.

On 1st May a report on the examination of the blood stated "good growth of streptococci in all tubes within sixteen hours." It was now obvious that we were dealing with a case of septicæmia, and he was put on the list of patients dangerously ill. On 2nd May an autogenous vaccine was started. He was sweating freely, and his temperature swinging— $103^{\circ}$  or  $104^{\circ}$  in the evenings to about  $100^{\circ}$  in the mornings. He had red patches over the left ankle and right thumb, with several small bullæ over his body. His wound was very dirty. On 3rd May he

was given 10 c.c. antistreptococcal serum. On 4th May the report on his urine was—"Sp. gr. 1020, acid, no alb., no sugar; a deposit on epithelial cells." Ordered brandy, half an ounce every three hours.

*5th May.*—Given autogenous vaccine and 10 c.c. antistreptococcal serum. His wound was covered with a dirty yellowish, somewhat dry membrane. He complained of pain in his left side, and some crepitant râles were heard over the right lung in front.

*10th May.*—Given 10 c.c. antistreptococcal serum. Still some râles over right lung, and in the evening he had a rigor. The wound was still dry. His left side was aspirated, but only a few drops of clear fluid were obtained. The report on this fluid was—"Gave a pure culture of streptococci," and the report on some material removed from the surface of the wound was—"Staphs., streps. and some bacilli. Cultures on broth gave streps. and *B. perfringens*."

*15th May.*—Wound cleaned out under a general anæsthetic, and a large tube inserted. Dressing changed to flavine.

*20th May.*—Crepitant râles over right base. Autogenous vaccine given.

*22nd May.*—Temperature lower. Condition better.

*28th May.*—Improving.

*30th May.*—As this man was dangerously ill, his mother had been allowed to remain beside him. She now complained of sore throat, and on examination it was found to be diphtheritic. Both were given 2,000 units of antidiphtheritic serum, and the mother was removed to the local isolation hospital.

On 1st June the wound was discharging and cleaning. On 4th June the blood examination gave the following result:—"No growth in three days," and two days later the wound was discharging freely, was clean and red, with all the membrane gone. This man did not present any signs of diphtheria, but the organism was found in his nose and throat, and he was removed to the isolation wards. The organisms persisted in his naso-pharynx for weeks, but he was ultimately certified free and sent to an auxiliary hospital; thence he was discharged.

The outstanding feature of this case—apart from his recovery

from septicæmia—was the condition of his wound. It was dry, leathery, and coated in patches with a dirty yellow covering. It was not a diphtheritic membrane. Quite near to him was another patient with an open wound on his leg which became covered with a diphtheritic membrane, and from which was obtained the Klebs-Löffler bacillus. This membrane was quite solid and uniform, and the infection was probably carried from Pte. A.

Pte. A. was nursed on a verandah, and was in the open air day and night. Various applications—hypertonic saline, glycerine—were tried, but in vain, to overcome the dry character of the wound. So long as the organisms remained in his blood, the wound maintained its unhealthy character—call it “lymph bound” or call it a state of toxic stasis—but when the blood became free from the streptococci then the character of the wound changed and pus flowed freely—a discharge that our forefathers welcomed as laudable pus.

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## TWO CASES OF EMBOLIC ANEURYSM OF PERIPHERAL ARTERIES COMPLICATING ULCERATIVE ENDOCARDITIS.

By DOUGLAS K. ADAMS, M.A., M.B., CH.B., B.Sc., F.R.F.P.S.G.,  
Assistant to Regius Professor of Medicine, Glasgow University; Visiting  
Physician, Bellahouston Hospital; Clinical Assistant and Extra Physician  
to Out-Patients' Department, Western Infirmary, Glasgow.

ANEURYSM of a peripheral artery is of sufficient rarity to justify the recording of the following cases. By a singular coincidence they occurred in the same wards within a month of one another.

CASE I.—W. K., æt. 29 years, metal polisher, was admitted to Hospital on 3rd December, 1919, complaining of shortness of breath of four years' duration. He first complained of this symptom in 1915, but had never been in hospital prior to his present admission. He stated that he had for some years complained of rheumatic pains in legs and occasional swelling of his ankles, but had never been confined to bed.

*On admission*, patient was poorly nourished. Complexion pale. The fingers showed well-marked clubbing. *Heart*.—Apex beat was in fifth interspace half an inch outside nipple line, right border of cardiac dulness was half an inch to right of right sternal margin, upper border at level of third rib. On auscultation there was a soft blowing murmur, systolic in time, audible over the apex and well conducted into the axilla. At the aortic cartilage there was a rough systolic murmur conducted into the vessels of the neck. The second aortic sound was almost completely replaced by a soft blowing diastolic murmur. The pulse was of the water-hammer type. *Lungs*.—Slight impairment of percussion note, especially at bases. R.M. vesicular. Râles audible at left base. *Nervous system* normal. *Abdomen*.—No enlargement of liver or spleen. *Urine* normal.

On 10th December, 1919, it was noted that the lower border of the liver was palpable, and he complained of generalised rheumatic pains. No rise in temperature was recorded. The pains were apparently relieved by aspirin and sodium salicylate, and his condition appeared slightly to improve. On 16th December, 1919, he complained of "rheumatic" pains radiating from buttock into left thigh. On the 23rd a swelling of the size of a hen's egg developed between the great trochanter and the posterior superior iliac spine. The swelling was fluctuant and pulsatile, the pulsations synchronising with the radial pulse. The blood culture was negative. He was transferred to the surgical side of the Hospital on 26th December, 1919, with a provisional diagnosis of embolic aneurysm of the gluteal artery due to ulcerative endocarditis.

The patient was received into Mr. Robert Carslaw's wards, and operated on by him on 30th December, 1919. He has kindly supplied me with the following notes:—Operation performed under chloroform and ether. Rectum surrounded by adhesions which were cleared with difficulty. The posterior division of the left internal iliac artery was ligatured, and pulsation in swelling in left buttock disappeared. After the operation the patient was troubled with sickness, vomiting, abdominal distension, and pain. He complained also of pains in chest with shortness of breath. His condition steadily declined, and his pulse became very irregular and fast. He died on the morning of 3rd January, 1920, of cardiac failure.

The *post-mortem* examination was carried out by Dr. Carstairs Douglas, whose notes I append:—Body was thin and deficient in subcutaneous fat. On opening the chest, pericardium was found to be a little thickened and opaque with a slight fibrinous exudate on the surface. The sac contained only a few drachms of fluid. The heart was much enlarged, there being great hypertrophy of both ventricles. Both mitral and aortic valves were affected, numerous vegetations being present, some apparently of recent origin. The root of the aorta showed signs of arteriosclerosis with some calcareous deposit. The lungs were very adherent to the chest wall and diaphragm, the adhesions being very tough over the lower lobes and bases on each side, so that removal was only possible by clipping with

scissors. The condition appeared to be due to a tuberculous pleurisy of old standing. Stomach and bowels much distended. Wall of stomach was very thin and appeared to consist almost entirely of the mucosa and submucosa. The inside was marked by a network of distended veins. The wall of the small bowel was also thin with venous engorgement. There were some adhesions round ileum and rectum. The spleen was a little enlarged and showed passive congestion, as did also the liver. Kidney and pancreas appeared to be healthy. Gluteal artery on left side showed presence of aneurysm, as large as a hen's egg, containing laminated clot.

CASE II.—D. McA., æt. 33 years, chauffeur, admitted to Hospital on 30th January, 1920, complaining of loss of power of left arm and leg of three months' duration. He stated that the left-sided hemiplegia occurred suddenly during the night in November, 1919. He had been a regular soldier for fifteen years, and had served in India, where he contracted malaria and dysentery in 1906. He had an attack of "rheumatism" in May, 1915, of two weeks' duration, also an attack of pleurisy in France in October, 1918. His health had been otherwise uniformly good, and he had been an athlete all his life. He had never been confined to bed with any cardiac complaint.

*Condition on admission.*—Patient was well-nourished, but pale and anæmic. His mental condition was somewhat facile, and he was in the habit of weeping on slight provocation. *Heart:* Apex beat in fifth interspace just outside nipple line diffuse and heaving, with well-marked presystolic thrill. Cardiac dulness to percussion—Upper border, third rib, right border at right sternal margin, left border three-quarters of an inch outside left nipple. The percussion note was slightly impaired over manubrium sterni. On auscultation at the mitral area there was a loud V.S. murmur conducted towards the axilla, also a somewhat rough diastolic murmur running up to the first sound. At the aortic cartilage there was a rough systolic murmur, conducted into the vessels of the neck: the second sound was completely replaced by a soft, blowing murmur well conducted down the sternum. The accessory arteries were somewhat thickened. Systolic blood-pressure, 145 mm.: mercury (tactile method); diastolic pressure,

60 mm.: mercury (auscultatory method). The pulse was of the water-hammer type: pulse-rate 96, rhythm regular.

*Nervous system.*—Left arm and leg showed loss of muscular power with increased tendon reflexes and spasticity. The left plantar reflex was extensor in character and ankle-clonus was easily elicited. There was a paresis of left side of face. Pupils were equal, and reacted normally. There was a slight effusion into left knee-joint.

*Respiratory system.*—No abnormality detected. *Abdomen* normal. No enlargement of liver or spleen. Marked clubbing of fingers. No œdema of legs. Wassermann reaction of blood serum moderately positive. Urine normal.

*Progress of case.*—A few days after admission slight enlargement of the liver was noted, but the spleen was not palpable. The effusion into the left knee-joint increased, and the temperature rose to 100° F. Examination of the blood gave the following result:—

Hæmoglobin, . . . . .	60 per cent.
Red blood corpuscles, . . . . .	4,000,000 per c.mm.
White blood corpuscles, . . . . .	8,000 „
Colour index, . . . . .	= 0.75

A blood culture gave a growth of staphylococci and some Gram negative bacilli of doubtful origin. These were regarded as probable contaminations, and a second culture was made with negative result. On 12th February he complained of severe pain in the right arm, and there was noted for the first time a paralysis in the ulnar distribution, with wasting of thenar and hypothenar eminences and interossei. Examination of the fore-arm revealed a small fusiform swelling in the middle third of the anterior aspect of the fore-arm towards the ulnar side. This at first appeared to resemble a neurofibroma, but on closer examination a distinctly pulsatile character was detected. The same day the case was transferred to Mr. Robert Carslaw's wards with a diagnosis of embolic aneurysm of the right ulnar artery, due to ulcerative endocarditis. In view of the patient's cardiac condition Mr. Carslaw operated under a local anæsthetic. A fusiform aneurysm of pea-nut size was found in the course of the right ulnar artery in the middle third. The ulnar nerve



was firmly adherent to the sheath of the aneurysm, its fibres being spread out fanwise. As the patient's general condition was unsatisfactory the artery was ligatured proximally and distally to the aneurysm, and a small portion of the sac which was firmly adherent to the nerve was excised. The patient died a few days later of a failing heart. Permission for a *post-mortem* examination was refused.

It will be noted that in both cases there was a definite rheumatic history, and in both the blood culture was negative.

Investigation of the literature reveals the fact that embolic aneurysms of peripheral arteries are of great rarity. Irving Simons<sup>1</sup> in a critical review of bacterial endocarditis gives a list of recorded cases. These include the sciatic artery (one case), radial artery (one case), ulnar artery (one case), femoral artery (two cases), and popliteal artery (one case). I have been unable to find records of any other cases in the literature.

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#### REFERENCE.

- <sup>1</sup> *Quarterly Journal of Medicine*, April, 1914.
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## Obituary.

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JOHN HAMILTON FULLARTON, M.A.GLASG., D.Sc.GLASG.,  
L.R.C.P., L.R.C.S.ED., L.R.F.P.S.G.

THE death of Dr. John Hamilton Fullarton, which took place suddenly on 6th May at his residence in London, has removed from the medical and scientific world a man of note.

Dr. Fullarton was born in Arran in 1856. He was a brilliant student of science in Glasgow University, graduating B.Sc., in 1880, and M.A. (with highest honours in Natural Science) in 1881. He continued his studies at Leipzig, and on his return became assistant to the Professor of Natural History in Glasgow University, the late Dr. John Young. He held this post for some years, as also that of Lecturer on Biology at Queen Margaret's College. Thereafter for many years he was a member of the Scottish Fishery Board, and for some time he acted as Superintendent of the Scottish Fishery Board Marine Laboratory. During this period he held the appointment of Examiner in Zoology in Glasgow University. From time to time he published many important scientific papers as a result of his marine studies and research. He was a Fellow of the Royal Society of Edinburgh, and a member of several European scientific societies. Late in life he qualified in medicine, taking the Triple Qualification of Edinburgh and Glasgow in 1906.

Some of our readers may remember him as a lecturer, some as an examiner, and others as a student of medicine in the wards of the Glasgow Royal Infirmary, but to all who knew him he is remembered as a man of forceful personality, of outstanding attainments, and of great kindness and modesty of manner. He was a man of wide interests, and although deeply engrossed in scientific and medical matters, he was throughout his life keenly interested in politics. Of recent years he had been practising as a medical consultant in London, and held several important public appointments. His loss will be felt by a wide circle of friends. He leaves a widow, but no children.

## CURRENT TOPICS.

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ROYAL FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—At the monthly meeting of Fellows of this Faculty, the following were admitted as Fellows of Faculty, viz.:—James Devon, L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P.S.G., 11 Rutland Square, Edinburgh; Alexander Morton, M.D., 5 Woodside Place, Glasgow; and Edward James Primrose, M.D., B.Sc., 551 Dumbarton Road, Glasgow.

DIPLOMAS IN PUBLIC HEALTH.—At the recent examinations in Glasgow for the Diploma in Public Health of the Scottish Conjoint Board of the Royal Colleges of Physicians and Surgeons of Edinburgh and Royal Faculty of Physicians and Surgeons of Glasgow, the following candidates passed for this diploma:—Margaret Hogg Grant, B.Sc., M.B., Ch.B., Glasgow; George Herbert Gunn, M.B., Ch.B., Thurso; Richard Fraser Lunn, L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P.S.G., Gosforth; Archibald Buchanan MacDougall, L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P.S.G., Glasgow; James Morrison Ritchie, M.A., M.B., Ch.B., Glasgow; John Miller Young, M.B., Ch.B., Prestwick. The following candidates passed the first part of the examination:—Joseph Chalmers, M.B., Ch.B., Annan; Robert MacLean Courtney, M.A., M.B., Ch.B., Pollokshaws; Dugald Ferguson, M.B., Ch.B., Buckhaven; Ronald Thomson Grant, M.B., Ch.B., Glasgow; William Spence Melville, M.B., Ch.B., Lenzie; and William Semple Wallace, M.B., Ch.B., Castle-Douglas.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of Council of this College, diplomas in Tropical Medicine and Hygiene were conferred (conjointly with the Royal College of Physicians) upon five candidates. One of these was Harold Edward Whittingham, M.B., Ch.B.Glasg. The Diploma in

Public Health was conferred upon John Nairn Dobbie, M.B., Ch.B.Glasg.

BRITISH MEDICAL ASSOCIATION.—The Summer Clinical Meeting of the Glasgow and West of Scotland Branch of this Association was held in the Pathological Department of the Glasgow Royal Infirmary on the afternoon of Wednesday, 12th inst. There was a good attendance of members under the presidency of Dr. Livingstone London. An interesting demonstration of cases was given by Mr. T. Kay, Dr. J. B. McKenzie Anderson, Dr. John Henderson, Dr. W. R. Jack, Dr. John Cowan, and Dr. J. Rennie. Thereafter Professor J. H. Teacher, Dr. A. M. Kennedy, and Dr. J. Arch. Campbell provided instructive demonstrations both by lantern and microscope. The meeting was duly appreciated by the members, and the thanks of the Association were accorded to the Staff of the Royal Infirmary for their hospitality, and for the excellent and instructive programme which they had provided.

OUR SPECIAL SCHOOLS.—Over twenty years ago the School Board of Glasgow began to undertake the education of mentally and physically defective children.

At first special classes were held in the ordinary elementary schools, church halls, and in such other premises as were available.

Since the passing of The Education of Defective Children (Scotland) Act, 1906, these classes have gradually increased in number, and evolved into the modern and well-equipped special schools in which the mentally and physically defective children are now housed.

There are at present under the Education Authority of Glasgow ten such schools entirely set apart for the education of defective children; three of these are purely open-air schools. In addition, there is accommodation for defective children in twenty-four ordinary elementary schools.

The total number of defective children at present on the roll is 3,844; of these, 2,372 are physically and 1,472 mentally defective.



Ambulances attended by trained nurses are provided for the conveyance to and from school of such children as may require it.

In the case of Burnside Open-Air School, the children are conveyed by special tramcar from Bridgeton Cross.

In addition to a biscuit and glass of milk at 11 A.M., substantial dinners are served daily, and cod liver oil and chemical food are given to suitable cases. A charge of 1s. 3d. per week is made for these advantages. In the newer schools spray baths have been installed and are much appreciated.

The children are under constant medical supervision, and receive such treatment as may be found necessary at the hands of the school nurses.

In addition to the ordinary school subjects, the older physically defective girls receive training in typing, shorthand, dress-making and design, and the boys are instructed in the use of tools.

The mentally defective girls are taught dressmaking, cooking, and laundry work, and the boys tailoring and shoemaking. Basketmaking is soon to be added to the curriculum.

In addition to the special schools, there are classes provided for the education of blind children, those suffering from high degrees of myopia, and also for the training in lip-reading of deaf and semi-deaf children. There are seven centres for the blind, attended by 35 children, three for the myopes with 93 scholars, and three for the deaf and semi-deaf children with an attendance of 91.

Mention must be made of the Biggart Memorial Home at Prestwick, where provision has been made for the reception and education of 40 children who are in need of rest and change. The parents, according to their means, contribute a weekly payment towards the maintenance of the child while in the home.

During the last year 480 children were passed out from the schools for physically defectives sufficiently recovered to attend ordinary elementary schools.

**THE SCOTTISH NURSES' CLUB.**—The annual meeting of the Club was held within the Club premises, 205 Bath Street,

Glasgow, on Saturday, 27th March, 1920. The Marchioness of Ailsa, the President of the Club, occupied the chair. The annual report was submitted by the secretary. The Club was founded about fifteen months ago, and had its inception in the minds of the Scottish Nurses' Association, who recognised the great need in Glasgow and the West of Scotland for a meeting-place for nurses, as a temporary home and resting-place for nurses demobilised and waiting for new appointments, for nurses on leave or on holiday, and for those from a distance passing through Glasgow.

The first beginnings of the Nurses' Club were small. The Scottish Nurses' Association, whose President at that time was Mrs. Strong, for many years matron of the Royal Infirmary, rented two rooms in 103 Bath Street, which were used as a meeting-place for nurses. The supervision of these rooms was carried out by Mrs. Strong, Miss Stewart, and Mrs. Newton Virtue, the officials of the Scottish Nurses' Association. But the expenses were entirely borne by nurses themselves using these rooms. The experience gained in these temporary premises showed that a further venture was assured of success. Sir Thomas Dunlop, then Lord Provost of Glasgow, Lady Dunlop, the Marchioness of Ailsa, Lady Maclay, Mrs. Pollock, Mrs. McCowan, and others, were approached, and an appeal was issued by Lord Provost Stewart, as a result of which a substantial sum was subscribed, and the Scottish Nurses' Club was placed on a safe foundation.

During the past year the Club has organised a course of post-graduate lectures. These lectures were delivered by prominent members of the medical profession in Glasgow belonging to different branches of the profession. They were well attended, and, as they presented the most recent views and practice on all subjects, were greatly appreciated by the nurses. At the close of the year (1919) there were 772 members of the Club. The Club has accommodation for a certain number of residents who, as is the case with other social clubs in the city, are entitled to occupy rooms for a given length of time, but not indefinitely, as it is considered advisable not to permit a nurse to occupy a room for an indefinite period, but rather to limit that period so that the benefits of residence can be shared

more extensively. It is plain that this privilege is widely taken advantage of, for during the past year 538 nurses were resident by the week, and several hundreds, both members and non-members of the Club, resided for one night only. Food is served, as is the case in social clubs, and we find in the annual report that over 4,000 meals were served during the latter six months of the year (1919), both to residents and non-residents.

It is evident from the great popularity of the Club, which is already finding its residential premises too small, that it is filling an important place in the life of our city nurses. Miss M. R. Stewart, herself a trained nurse, is resident secretary. The Trustees, the Management Committee, and the House Committee are composed of well-known city ladies and gentlemen, along with a certain number of professional nurses.

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## REVIEWS.

*An Introduction to General Physiology.* By W. M. BAYLISS, M.A., D.Sc., F.R.S. London: Longmans, Green & Co. 1919. (7s. 6d. net.)

PROFESSOR BAYLISS'S unique book on the *Principles of General Physiology* has now been followed by an *Introduction*—an introduction, too, which is not merely a concentrated edition of the larger volume.

This small book, as might be surmised, attacks the problem with a predominant interest in the physico-chemical side. If allowance be made for the fact that there are other views which claim a following, this book, which, in seven chapters, deals with life and energy, food, the muscles, the special senses, the nervous system, the vascular system, and reproduction in a broad and simple fashion, can be read with interest and very real value by the medical student who has examinations to pass, and the practitioner who desires to obtain some insight into the problems of modern physiology. But it is essentially a laboratory book, and it is meant to be such. Each part of the subject discussed, capable of scientific demonstration, is illustrated by a series of practical exercises which make up the second part of the book.

It is a definite attempt, and, on the whole, a successful attempt to enunciate, without undue detail, the general principles which govern physiological processes. The exposition is certainly often dogmatic; the hypothesis to which the author inclines is clearly stated. Professor Bayliss realises this, and defends it on the ground that it is better to have one view clearly grasped than to have but half-appreciated conceptions of both sides of a problem. This book, read in conjunction with the *Principles of General Physiology*, will give any student a wide and thorough grasp of the science of physiology.



*Essentials of Physiology.* By F. A. BAINBRIDGE, M.A., M.D., D.Sc., F.R.S., and J. A. MENZIES, M.A., M.D. Third Edition. London: Longmans, Green & Co. 1919. (12s. 6d. net.)

THAT another edition of this book has been called for in about four years is good testimony to its value. It is, without doubt, a most excellent compendium of the subject, although, in the writer's opinion, an attempt has been made to get too much into small compass. One of the most satisfactory sections in the book is that dealing with the special senses, both hearing and vision being very well done. The section on renal secretion has also been brought up to date, and a good account is given of the modern views on the subject. The book is excellently illustrated, and the index is good.

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*The Physiology of Muscular Exercise.* By F. A. BAINBRIDGE, M.A., M.D., D.Sc., F.R.S. London: Longmans, Green & Co. 1919. (10s. 6d. net.)

THIS is a new volume of the monographs on physiology edited by Professor Starling, and it is a most creditable and interesting addition to the series. In the present book Professor Bainbridge states that he has attempted to present his subject "in such a way as to promote a closer connection between the investigator in the laboratory and those directly concerned with the health and well-being of the community." To-day, in the light of the appalling disclosures of the Medical Recruiting Boards throughout the country on the unfitness of the nation's manhood, it is a most happy coincidence that a volume should have been published in which a real attempt has been made to bring the laboratory work into relation with practical needs. Professor Bainbridge has quite rightly divided his subject into three heads—(a) the changes in skeletal muscle and the various stages of the transformation of energy; (b) the nature of the adjustments occurring elsewhere in the body so that the muscle may perform its work efficiently: and, finally (c), the means by which the necessary co-ordination takes place. The first of the three aspects, the most strictly scientific and theoretical, he dismisses

briefly and succinctly, as it belongs more to the realm of pure physiology; but under the other two heads he discusses fully the relation of exercise to respiration and circulation, and more particularly to the influence on the heart. His discussion of the problems of co-ordination and training is most interesting, maintaining, as he does, a most judicial and well-balanced outlook; indeed, at times the reader is almost exasperated by the absence of any definite inclination to one point of view rather than another. There is a good bibliography, but a fuller index would have been useful.

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*Half a Century of Smallpox and Vaccination.* By JOHN C. M'VAIL, M.D., LL.D. Edinburgh: E. & S. Livingstone. (5s. 6d. net.)

THIS slim, closely printed volume of 87 pages is a reprint of the Milroy Lectures on Public Health, delivered before the Royal College of Physicians of London in March, 1919, with alterations and additions.

The lectures are three in number. Lecture I deals with "Smallpox as it was and is," and is largely statistical. The thesis set out for proof is that (*a*) the fatality, (*b*) the infectivity, and (*c*) the prevalence of smallpox in this country, have very greatly diminished during the last half century, and more especially in the last two decades.

As regards prevalence, the statistics of recent years are practically conclusive on this point, and a table of deaths, quoted from Dr. Bruce Low's report, strongly supports this conclusion over the whole period. This table deserves quotation here:—

ENGLAND AND WALES.					
DEATHS FROM SMALLPOX IN DECADES.					
1867-76,	.	.	.	.	58,614
1877-86,	.	.	.	.	18,026
1887-96,	.	.	.	.	4,892
1897-1906,	.	.	.	.	4,763
1907-16,	.	.	.	.	139

With regard to fatality, the figures are drawn from varying sources, and for various reasons are not so reliable. In the

eighteenth century the only figures available are the deaths from smallpox, and in the case of the London Hospital for Smallpox and Inoculation, the admissions of patients and the death-rate amongst these. In the nineteenth century the same state of matters continued until notification of infectious diseases was established in 1889. Since then fatality-rates for epidemics are more strictly calculable. Previous to this date the hospital statistics tend to give too high fatality-rates (as Marson pointed out) "because severer cases were often sent to hospital, and it was sometimes overcrowded." On the other hand, the statistics subsequent thereto tend to give a low fatality-rate, since "systematic contact hunting brings out many very slight cases." Again, the practice of vaccination and revaccination makes the comparison of fatality-rates at different times before and after 1853 (when vaccination was made obligatory in England) somewhat uncertain. Another source of difficulty is the new conception that different types of smallpox are in existence—(1) a European or African type, usually severe in character, and arriving in this country *via* Spain, France, and Italy from North Africa, where smallpox is very prevalent; and (2) an American type, of a mild nature, and coming here from Canada, United States, and West Indies. On the whole, however, the statistics available show a considerable diminution in fatality during the nineteenth century.

With regard to infectivity, smallpox has usually been held as the type of an infectious disease, and to quote Osler, "persons exposed, if unprotected by vaccination, are almost invariably attacked." Dr. McVail differs from this older statement and says—"Smallpox has more resemblance to scarlet fever than to measles, in respect of the possibility of sporadic cases." These sporadic cases seem to happen in the pre-epidemic stage, and account for the slow rise of the number of cases at first. The Gloucester epidemic of 1895-96 and the London epidemic of 1901 took nearly six months incubation before assuming epidemic proportions. Bacteriologists would probably explain this by saying that the virus was being gradually exalted in virulence and infecting power in successive cases, and so, finally, was able to spread more rapidly in the presence of suitable material.

So much for what our author calls the "quality" of the infectivity. The "quantity" of it depends on the amount of the eruption and the character of the same, being less in the milder cases and less infective in the abortive rashes usually seen in vaccinated individuals.

In Lecture II an interesting account is given of "Vaccination as it was and is." The difficulties of emergency vaccination of contacts prior to the introduction of calf lymph are pointed out, whereas now the Ministry of Health constantly keeps in cold storage half a million tubes. The question of infantile vaccination making the spread of smallpox more easy, because it conduces to a milder type of disease not readily recognised, is discussed at some length. The conclusion reached is that this is no valid objection to the continuance of infantile vaccination.

In Lecture III the control of smallpox in the present day is discussed in a masterly fashion, and it should be read by the members of all public health bodies, more especially in view of the outbreak of smallpox at present in our midst. It cannot be readily summarised, but under the heads of vaccination, revaccination, diagnosis, surveillance of contacts, isolation of smallpox, and disinfection, much sound instruction is imparted, the fruit of wide experience and ripe wisdom.

The whole book would make an admirable text-book for the examination of students for the Diploma in Public Health, and it is to be hoped that the day is not far distant when such students will have several such prescribed books to read, learn, and inwardly digest.

From the whole survey, the outstanding conclusion reached is that recent successful vaccination confers a high degree of immunity against smallpox, and that, practised at large, it is the sheet-anchor in the face of an epidemic outbreak.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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EDITED BY GEORGE MACINTYRE.

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### MEDICINE.

#### Cerebro-Spinal Fluid in Syphilis: Prognostic Indications.—

In the *Journal of the American Medical Association*, 6th December, 1919, Dr. Joseph McIver gives his results in an investigation of the cerebro-spinal fluid in a series of 91 cases of primary and secondary syphilis. The tests made were the Wassermann reaction, protein determination, and cell count. All the cases selected for examination gave a + + + + positive Wassermann reaction of the blood serum. The average number of cells per cubic millimetre (counted immediately on removal of the cerebro-spinal fluid) was nine. Differential cell counts were not made. Only two cases showed a slight excess of protein in the cerebro-spinal fluid. The vast majority of cases suffered from headache after lumbar puncture, although not more than 4 c.c. were withdrawn, and the patients were confined to bed for three or four days.

Dr. McIver concludes that there is a slight increase of lymphocytes in the cerebro-spinal fluid in the majority of cases of primary and secondary syphilis, and that the increase in protein content does not appear as early as the increase in lymphocytes. He does not consider that the examination of the cerebro-spinal fluid by present methods is likely to indicate the prognosis, so far as the possible development of neuro-syphilis is concerned.—DOUGLAS K. ADAMS.

**Prognosis of Syphilitic Aortitis.**—In the above *Journal*, 13th December, 1919, Dr. Wm. D. Reid discusses the prognosis of syphilitic aortitis. His series comprises 61 cases. He concludes that the weight of evidence is against the power of mercury and iodide alone to arrest the progress of the disease. The results so far obtained by intensive anti-syphilitic treatment are promising.

Early diagnosis is obviously of prime importance. Shortness of breath, pain in the chest, or both, were present in all of the cases. Cough was present in 15 of the cases, and cardiac palpitation in 9. Supracardiac dulness was increased in 27 of his cases. In 23 cases there was a V.D. murmur at the aortic area, in 19 there was a V.S., and in 20 both murmurs were present. The average width of the aorta in the 22 cases in which ortho-diagraphy was employed was 7.5 cm. The greatest width was 10.3 cm., and the least 6 cm.—DOUGLAS K. ADAMS.

**Operative Treatment of Exophthalmic Goitre.**—In the *Journal of the American Medical Association*, 31st January, 1920, vol. cxxiv, No. 5, Dr. W. E. Sistrunk discusses the question of operative treatment of exophthalmic goitre in the light of the experience of the Mayo Clinic. He claims that surgery gives a higher percentage of cures than any other line of treatment in this disease. He emphasises the importance of early diagnosis by metabolic tests of hyperthyroidism, and in these cases the ideal surgical treatment is partial thyroidectomy. In cases operated on at this early stage the death-rate is very low, and the chances of permanent recovery are good. The investigation of the metabolic-rate is carried out in all cases. An increase above normal of 60 per cent in this rate would in most cases appear to be a contra-indication for operation. In such cases a preliminary ligation is performed as a means of testing their ability to stand any further operative surgical procedure. The reaction which follows the ligation of one superior pole is similar to, but much less marked than, that which follows thyroidectomy; it consists in increase in pulse-rate and temperature, vomiting, nervousness, and mental irritability.

It is claimed that thyroidectomy stops the hyperthyroidism; it is obviously impossible for other organs previously seriously damaged to return to normal.

The author states that to reduce the metabolic-rate to normal it is necessary to remove all of one lobe, the isthmus, and the greater portion of the other lobe, leaving a piece of gland tissue probably not larger than one-half or one-third of a normal lobe.—DOUGLAS K. ADAMS.

### *Books, Pamphlets, &c., Received.*

- Manual of Obstetrics for the Use of Students and Junior Practitioners**, by O. St. John Moses, M.D., C.M., D.Sc., F.R.C.S., F.R.S.E. With 136 illustrations. London: J. & A. Churchill. 1920. (21s. net.)
- Syphilis in Childhood**, by Leonard Findlay, M.D., D.Sc., F.R.F.P.S.G. London: Henry Frowde and Hodder & Stoughton. 1919. (8s. 6d. net.)
- Medieval Medicine**, by James J. Walsh, K.C.St.G., M.D., Ph.D., Sc.D., Litt.D. London: A. & C. Black, Limited. 1920. (7s. 6d. net.)
- War Diseases and Pensions: A Manual of Diagnosis and Treatment for Medical Referees, General Practitioners, and Medical Boards**, by R. M. Wilson, Temp. Capt., R.A.M.C., M.B., Ch.B., and W. M. T. Wilson, late Temp. Capt., R.A.M.C., M.B., Ch.B. With a Chapter on the Diagnosis of Malaria, by Major Ernest Black. London: Henry Frowde and Hodder & Stoughton. 1919. (3s. 6d. net.)
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**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDED 29TH MAY, 1920.**

	WEEK ENDING				
	May 1.	May 8.	May 15.	May 22.	May 29.
Mean temperature, . . .	44·2°	47·3°	48·7°	50·1°	57·4°
Amount of rainfall, . ins.	1·26	1·12	0·52	1·29	0·65
Deaths (corrected), . . .	438	428	397	375	316
Death-rates, . . . . .	20·5	20·1	18·6	17·6	14·8
Zymotic death-rates, . . .	1·5	1·3	1·5	1·1	0·8
Pulmonary death-rates, . .	6·8	5·1	4·7	4·0	3·4
DEATHS—					
Under 1 year, . . . . .	74	73	77	78	56
60 years and upwards, . .	104	113	101	97	87
DEATHS FROM—					
Small-pox, . . . . .	3	1	9	6	2
Measles, . . . . .	24	18	27	12	10
Scarlet fever, . . . . .	2	...	...	3	1
Diphtheria, . . . . .	3	5	4	5	4
Whooping-cough, . . . . .	3	4	2	4	1
Enteric fever, . . . . .	1	...	...	...	...
Cerebro-spinal fever, . . .	...	1	..	3	4
Diarrhoea (under 2 years of age),	4	2	4	6	2
Bronchitis, pneumonia, and pleurisy, . . . . .	141	122	111	78	78
CASES REPORTED—					
Small-pox, . . . . .	13	54	37	21	48
Cerebro-spinal meningitis, .	3	2	7	9	4
Diphtheria and membranous croup, . . . . .	41	41	29	22	26
Erysipelas, . . . . .	15	17	22	12	15
Scarlet fever, . . . . .	68	68	63	72	49
Typhus fever, . . . . .	...	...	...	2	3
Enteric fever, . . . . .	1	3	1	4	3
Phthisis, . . . . .	50	41	51	50	55
Puerperal fever, . . . . .	4	6	9	5	10
Measles,* . . . . .	767	395	376	527	327
Ophthalmia neonatorum, . .	20	9	13	19	20

\* Measles not notifiable

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# The Glasgow Medical Journal

EDITED BY  
W. R. JACK and JOHN PATRICK

WITH THE ASSISTANCE OF  
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